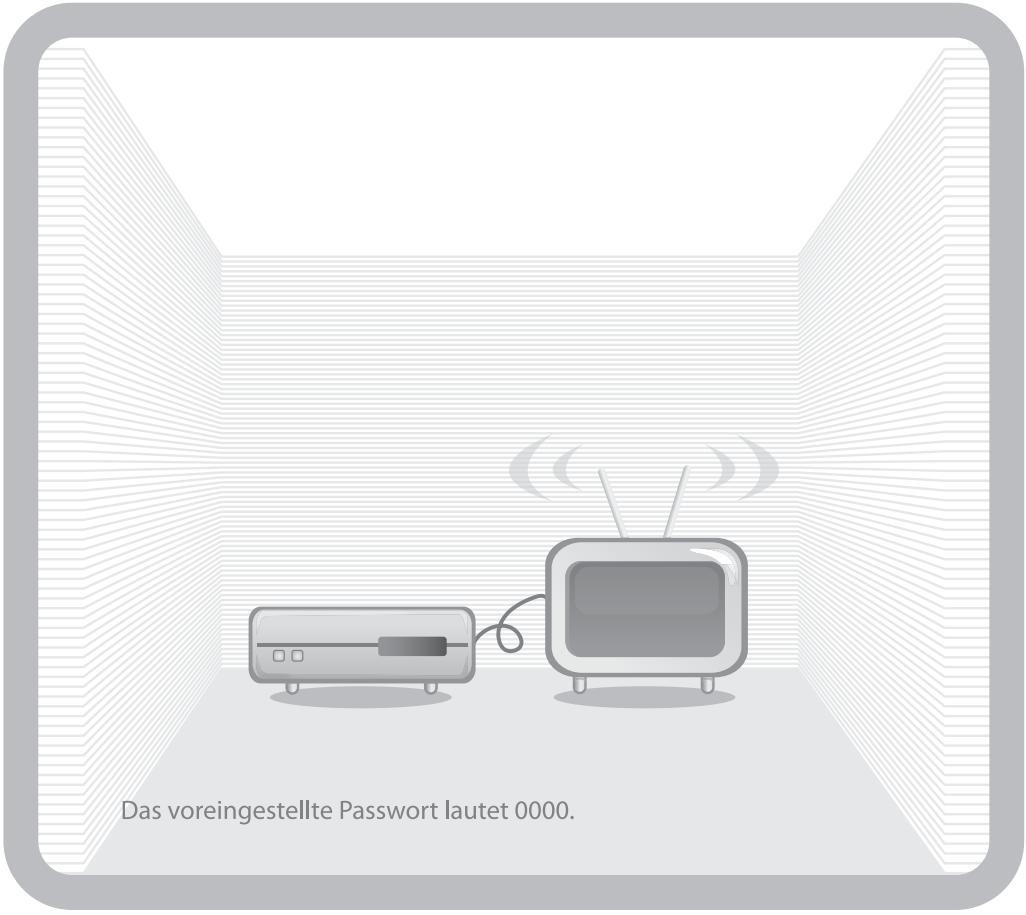
Digitaler HD-Rekorder



Bedienungsanleitung

iCord HD

HUMAX
EASY DIGITAL

Notice

Thank you for purchasing a HUMAX product. Please read this user's manual carefully to be able to safely install, use and maintain the product at maximum performance. Keep this user's manual next to your product for future reference. The information in this user's manual is subject to change without notice.

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Notice

Warnings, Cautions and Notes

Throughout the whole manual, pay special attention to the following marks that indicate hazardous situations.

- **Warning**
  Indicates a hazardous situation which could result in serious injury.
- **Caution**
  Indicates a situation which could damage the equipment or other apparatus.
- **Note**
  Indicates additional information to make the user aware of possible problems and information of any importance to help understand, use and maintain the installation.

Meaning of Symbols

To reduce the risk of electric shock, do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.

This symbol indicates **dangerous voltage** inside the product that presents a risk of electric shock or personal injury.

This symbol indicates important instructions accompanying the product.

Instruction about the 'WEEE' Symbol

This product should not be disposed with other household wastes at the end of its working life. Please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. This will prevent possible harm to the environment or human health from uncontrolled waste disposal.

- **Domestic users:**
  Please contact either the retailer where you purchased this product or their local government office for details of where and how they can take this item for environmentally safe recycling.
- **Business users:**
  Contact your supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

Safety Warning

This product has been manufactured to comply with international safety standards. Please read the following safety precautions carefully.

Safety Instructions and Precautions

1. MAINS SUPPLY

90-250V a.c., 50/60Hz

- Operate this product only from the type of power supply indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your local power company.
- Disconnect the product from the mains before you start any maintenance or installation procedures.

2. OVERLOADING

- Do not overload a wall outlet, extension cord or adapter as this may result in electric fire or shock.

3. LIQUID

- The product should not be exposed to liquid of any kind. In addition, no objects filled with liquid should be placed on the apparatus.

4. CLEANING

- Disconnect the product from the wall outlet before cleaning.
- Use a light damp cloth (no solvents) to dust the product.

5. VENTILATION

- The slots on top of the product must be left uncovered to allow proper airflow into the unit.
- Do not stand the product on soft furnishings or carpets.
- Do not stack electronic equipments on top of the product.

6. ATTACHMENTS

- Do not use any unsupported attachments as these may be hazardous or cause damage to the product.

7. CONNECTION TO THE SATELLITE DISH LNB

- Disconnect the product from the mains before connecting or disconnecting the cable from the satellite dish. Failure to do so can damage the LNB.

8. CONNECTION TO THE TV

- Disconnect the product from the mains before connecting or disconnecting the cable from the TV. Failure to do so can damage the TV.

9. EARTHING

- The LNB cable must be earthed to the system earth for the satellite dish.

10. LOCATION

- Place the product indoors to avoid exposing it to lightning, rain or sun.
- Do not place it near a radiator or heat register.
- Make sure it has more than 10 cm clearance from any appliances susceptible to electromagnetic influences, such as a TV or a VCR.
- Do not block the openings with any object, and do not place the product on a bed, sofa, rug, or other similar surface.
- If you place the product on a rack or a bookcase, ensure that there is adequate ventilation and that you have followed the manufacturer's instructions for mounting.
- Do not place the product on an unstable cart, stand, tripod, bracket, or table where it can fall.
- A falling product can cause serious injury to a child or adult, and serious damage to the appliance.

Safety Warning

11. LIGHTNING, STORM OR NOT IN USE

- Unplug the product from the wall outlet and disconnect the antenna during a thunderstorm or when left unattended and unused for long periods of time. This will prevent damage to the unit due to lightning and power-surges.

12. EXTRANEOUS OBJECTS

- Do not insert anything through the openings in the unit, where they can touch dangerous voltage points or damage parts.

13. REPLACEMENT OF PARTS

- When replacement of parts is required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitution may result in additional damage to the unit.

Warning

1. To avoid damage of the power cord or plug;

- Do not modify or process the power cord or plug arbitrarily.
- Do not bend or twist the power cord.
- Make sure to disconnect the power cord holding the plug.
- Keep heating appliances as far as possible from the power cord in order to prevent the cover vinyl from melting.
- The mains plug, as a disconnection device, shall remain readily accessible by the user.

2. To avoid electrical shock;

- Do not open the main body.
- Do not insert metal or inflammable objects inside the product.
- Do not touch the power plug with wet hands.
  Disconnect the power cord in case of lightning.

3. To avoid damage of product;

- Do not use the product when it is out of order. If you continue to use the product when defective, serious damage can be caused to it. Make sure to contact your local product distributor if the product is out of order.
- Do not insert metal or alien substance into the slots for the modules or Smartcards. It may cause damage to the product and reduce its life span.

4. Hard Disk Drive

- Do not move the product or turn the power off suddenly while the hard disk drive is running.
- The company shall not be liable for any corruption of data on the hard disk drive caused by the carelessness or misuse of users.

Contents

1. Before Using the Product GB7
1.1 Package Contents. GB7
1.2 Front Panel GB8
1.3 Conditional Access GB9
1.4 Rear Panel GB10
1.5 Remote Control GB11
1.6 Remote Control Batteries GB14

2. Setup GB15
2.1 Connecting the Antenna GB15
2.2 Connecting the TV and VCR GB16
2.3 Powering On GB21

3. Installation Wizard GB22
3.1 Language GB22
3.2 Time Region GB22
3.3 Connection Type GB23
3.4 Default Channels GB23
3.5 Antenna Setting. GB24
3.6 Channel Search GB24
3.7 Software Update GB25
3.8 Display GB25
3.9 HDD Partition GB26
3.10 Result GB26
3.11 Installation Checklist GB27

4. Basic Operation GB28
4.1 Switching Channel GB28
4.2 Volume Control GB28
4.3 Resolution GB28
4.4 Sleep. GB29
4.5 Wide GB29
4.6 Audio GB30
4.7 Subtitle GB30
4.8 Teletext GB31
4.9 Programme Information (i-plate) GB31

5. Channel List DE33
5.1 My TV List. DE33
5.2 Favourite List. DE35
5.3 Satellite List DE35
5.4 Scramble List. DE36

6. TV Guide GB37
6.1 Using TV Guide GB37
6.2 Highlights GB38
6.3 Schedule GB39
6.4 Find GB40

7. Preferences. GB42

Contents

7.1 Parental Control GB42
7.2 Language Setting GB44
7.3 Time Setting GB46
7.4 Media Setting GB48
7.5 A/V Setting GB49
7.6 Other Settings GB51

8. Edit Channels GB52
8.1 Edit Channel List GB52
8.2 Edit Favourite List GB55

9. Installation GB57
9.1 Antenna Setting [Fixed] GB57
9.2 Antenna Setting [SCD Antenna] GB61
9.3 Antenna Setting [Motor] GB63
9.4 Antenna Setting [SMATV] GB67
9.5 Search Channels [Fixed/SCD Antenna/Motor] GB68
9.6 Search Channels [SMATV-Auto] GB69
9.7 Search Channels [SMATV-Manual] GB70
9.8 Software Update GB71
9.9 Default Setting GB73

10. System GB74
10.1 Status GB74
10.2 Signal Detection GB74
10.3 Common Interface GB75

11. Media List GB76
11.1 Video GB76
11.2 Radio GB80
11.3 Music GB82
11.4 Photo GB84

12. Personal Video Recorder (PVR) GB86
12.1 Play bar GB86
12.2 Time Shifted Recording (TSR) and Playback GB87
12.3 Recording GB89
12.4 Bookmark GB91

13. Software Update GB92
13.1 OTA (Over the Air) GB92

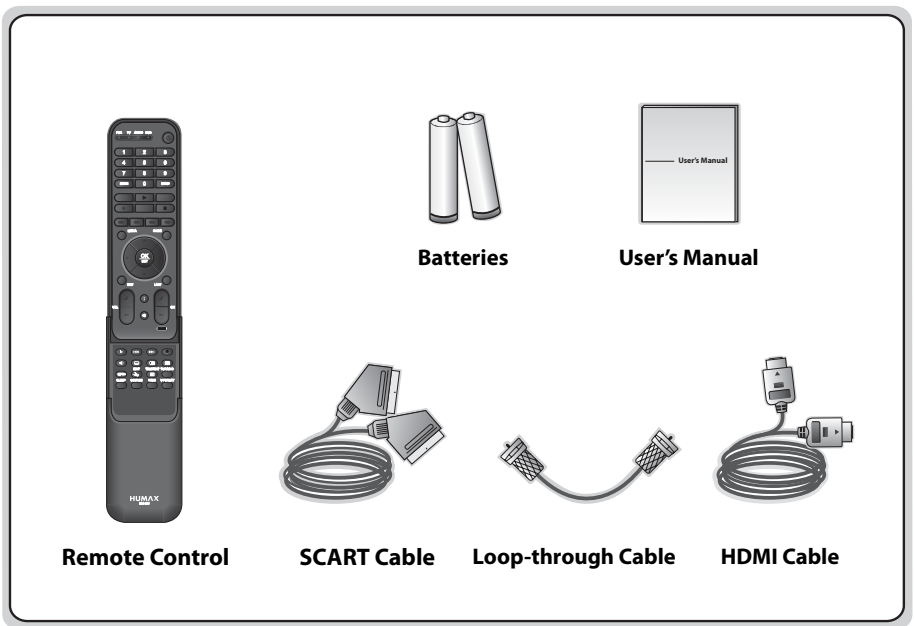
14. Appendix GB94
14.1 Menu Map GB94
14.2 Trouble Shooting GB95
14.3 Error Message GB97
14.4. Specification GB99
14.5 Glossary GB101
14.6 Service and Support GB103
14.7 Remote Control Code List GB105

1. Before Using the Product

This chapter provides detail instructions on the product and its accessories.

1.1 Package Contents

Please check all package contents before using your product.



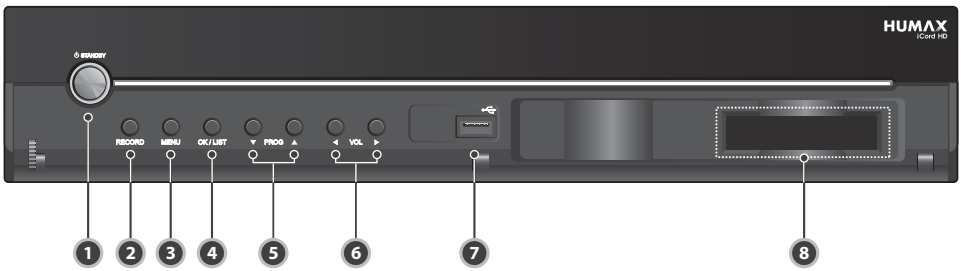
Note:

- Faults may occur if the remote control is left without battery for a long time. Always keep the battery inserted in the remote control.
- Package contents may vary according to area.

Caution:

- The company shall not be liable for problems caused by changing hard disk drive by user.
- The company shall not be liable for problems caused by the installation of hard disks bigger than 160/320GB.

1.2 Front Panel



1. **STANDBY BUTTON**
   Switches between operation and standby modes.
2. **RECORD BUTTON**
   Records programme.
3. **MENU BUTTON**
   Displays the menu.
4. **OK/LIST BUTTON**
   Confirms the selected operation or displays the channel list in normal viewing mode.
5. **PROG-/PROG+ BUTTON**
   Moves the TV/radio channel up or down.
6. **VOL-/VOL+ BUTTON**
   Adjusts the audio volume.
7. **USB Host**
   Connect to the USB memory or external HDD.
8. **CI-MODULE SLOT**
   A slot for CI-Modules.

Note: The front of the product is subject to change without notice.

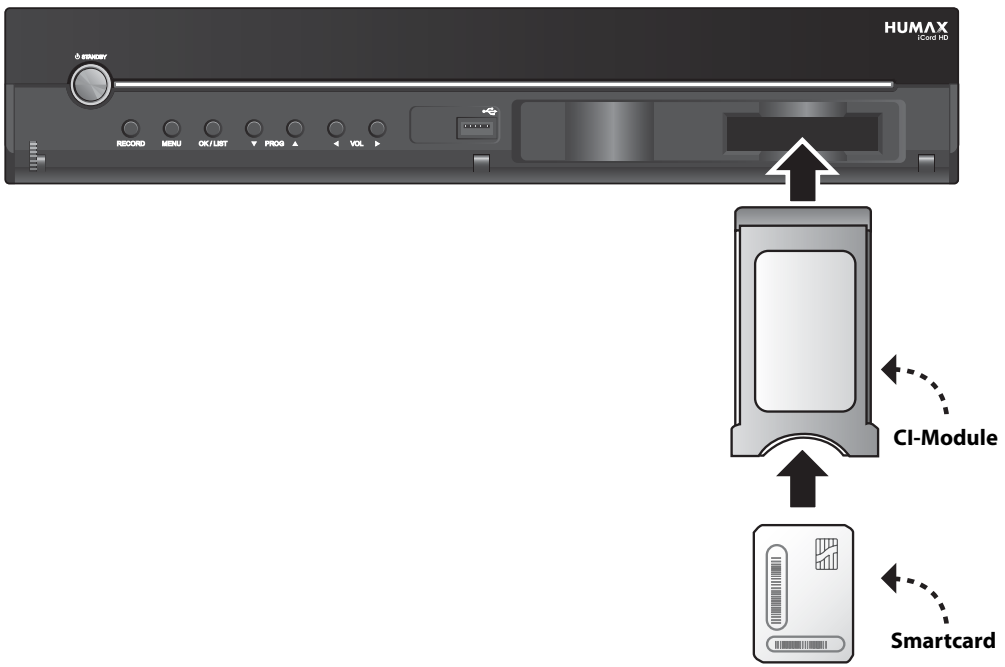
1.3 Conditional Access

Although some TV and radio channels are free to air, most TV and radio/music channels are available on a subscription basis and can only be enjoyed via a Conditional Access component.

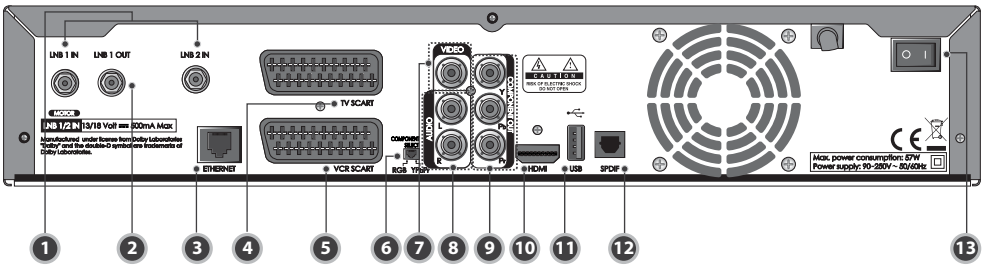
1. Inserting a CI (with Smartcard)

A CI module looks like a PC map (PCMCIA) for laptops. There are different kinds of CI Modules, suitable for different coding systems; Irdeto, Conax and more. Additionally to the CI module, a Smartcard is needed to decode the channels.

1. Open the right-hand flap on the front panel of the product to expose the card slot.
2. Follow the instructions of the module and insert the Smartcard into the CI module.
3. Keep the CI module (with the Smartcard) horizontal.
4. Insert the CI module into the slot.



1.4 Rear Panel

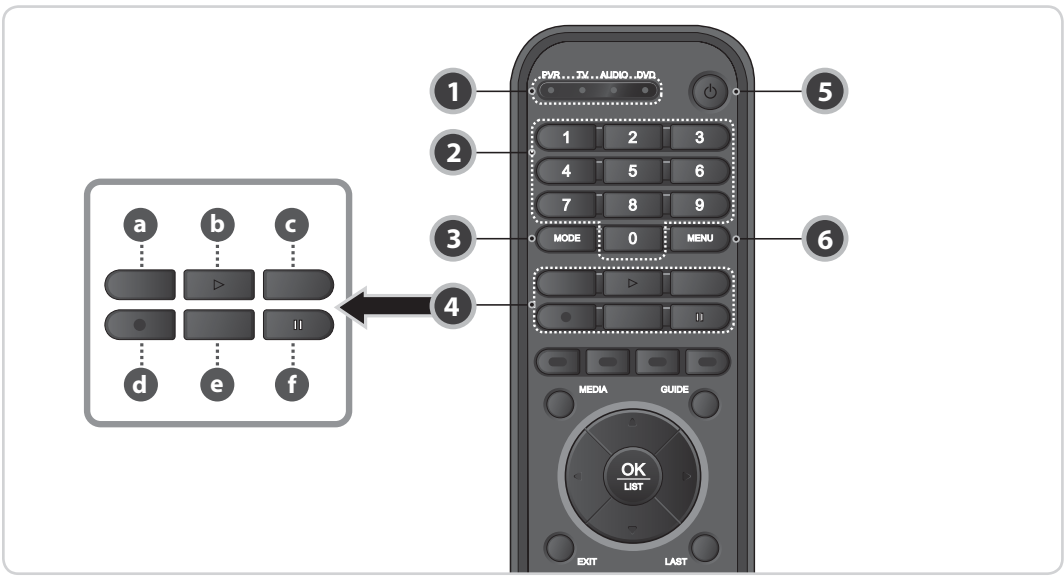


1. **LNB 1 IN, LNB 2 IN**
   Connects a satellite antenna cable. Up to two cables can be connected.
2. **LNB 1 OUT**
   Connects another digital satellite receiver.
3. **ETHERNET**
   Ethernet port (for future use).
4. **TV SCART**
   Connects to the TV using a TV SCART cable.
5. **VCR SCART**
   Connects to the VCR or DVD using a VCR SCART cable.
6. **COMPONENT SELECT**
   Switch for changing video. (default: YPbPr)
7. **VIDEO**
   Connects to the TV or VCR using an RCA cable.
8. **AUDIO**
   Connects to the TV or VCR using an RCA cable.
9. **COMPONENT(YPbPr)**
   Connects to the TV or VCR using a component cable.
10. **HDMI**
    Connects to the TV using an HDMI cable.
11. **USB Host**
    Connects to the USB memory or external HDD.
12. **SPDIF**
    Connects to the audio system using an S/PDIF cable. (digital audio)
13. **ON/OFF**
    Powers on/off.

Note: The rear panel of the product is subject to change without notice.

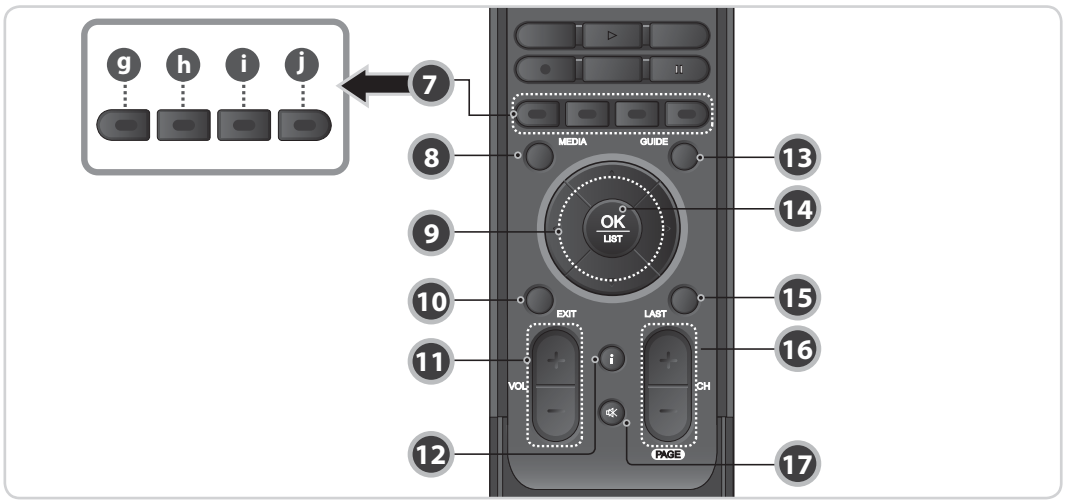
1.5 Remote Control

Note: The remote control of the product is subject to change without notice.



1. **Universal LED**
   Displays the operation mode of each device.
2. **NUMERIC(0-9) BUTTONS**
   Enters a TV/radio channel number or menu option number.
3. **MODE**
   Changes the mode from PVR, TV, audio and DVD.
4. **PLAYBACK CONTROL BUTTONS**
   a. **FAST REWIND**
      Rewinds at high speed. Each time you press this button the rewind speed is increased.
   b. **PLAY**
      Plays at normal speed or resumes.
   c. **FAST FORWARD**
      Fasts forward at high speed. Each time you press this button the fast forward speed is increased.
   d. **RECORD**
      Records programme.
   e. **STOP**
      Stops a recording or goes to the live programme.
   f. **PAUSE**
      Pauses the live programme or recording.
5. **STANDBY**
   Switches between operation and standby modes.
6. **MENU**
   Displays the main menu.

1. Before Using the Product



7. COLOUR BUTTONS

g. RED
Displays the channel list in normal viewing mode.

h. GREEN
Displays the favourite channel list in normal viewing mode.

i. YELLOW
Displays the satellite channel list in normal viewing mode.

j. BLUE
Displays the scrambled channel list in normal viewing mode.

8. MEDIA
Displays the media list.

9. ARROW BUTTONS
Navigates through the menu options.

10. EXIT
Exits all On-Screen Display (OSD) screens.

11. VOL+/VOL-
Adjusts the audio volume.

12. i (INFORMATION)
Displays the channel and programme information.

13. GUIDE
Displays the programme guide.

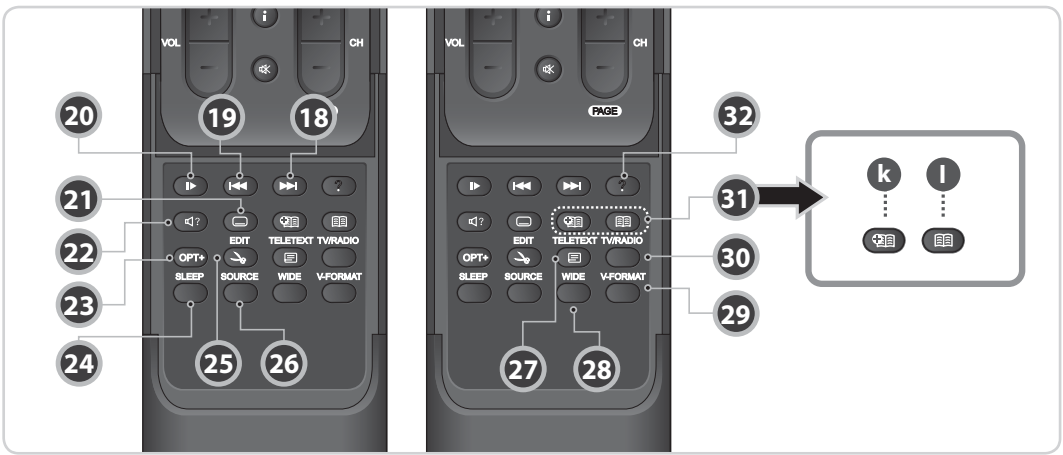
14. OK/LIST
Selects a menu or confirms the selected operation. Displays the channel list while watching a programme.

15. LAST
Returns to the previous channel.

16. CH+/CH-
Changes the channel.

17. MUTE
Mutes or unmutes the audio temporarily.

1. Before Using the Product



18. NEXT
Goes to the next chapter.

19. PREVIOUS
Goes to the previous chapter.

20. SLOW
Plays the programme in slow motion.

21. SUBTITLE
Displays the subtitle language list.

22. AUDIO
Displays the audio list.

23. OPT+
Select favourites, lock, delete or rename channels.

24. SLEEP
Sets the sleep time.

25. EDIT
Displays the edit screen.

26. SOURCE
Controls the output of TV SCART.

27. TELETEXT
Switches between the teletext and TV modes.

28. WIDE
Sets the display format.

29. V-FORMAT
Changes the resolution of video.

30. TV/RADIO
Switches between TV and radio modes.

31. BOOKMARK

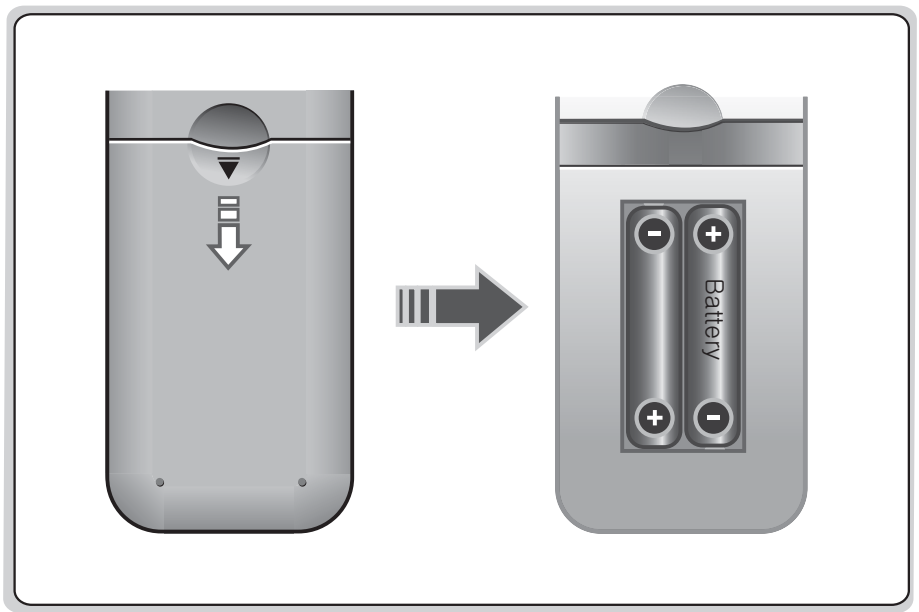
k. ADD BOOKMARK
Saves the current viewing position as a bookmark during playback.

l. BOOKMARK LIST
Displays the list of saved viewing positions during playback.

32. ? (Help)
(Currently not supported)

1.6 Remote Control Batteries

1. Press down the top of the battery cover and slide the cover off.
2. Insert the new batteries. Make sure the plus (+) ends meet the plus markings on the battery case.
3. Slide the cover back into place.



2. Setup

This chapter describes how to connect your product to the TV with the particular equipments for gaining optimum signal quality. The product provides various interfaces to connect to the TV, VCR or other devices. Select the most appropriate procedure depending on the equipment you have.

Note: If you encounter any problems setting up your product, please contact your local product distributor.

2.1 Connecting the Antenna

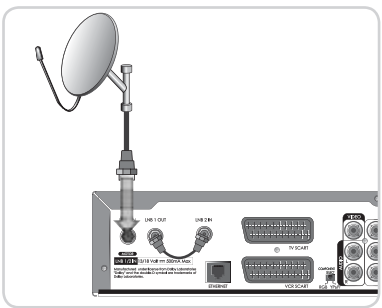
You can select one of the following antenna connections depending on the equipment you have. The product has two antenna modes according to setting.

1. Loop Through

1. Connect the antenna cable to LNB 1 IN.
2. Connect the other cable from LNB 1 OUT to LNB 2 IN.

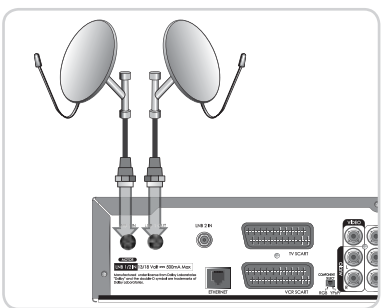
Note:

- Connect to LNB 1 IN when using the motor antenna, SCD Antenna (also known as Unicable or SATCR) or SMATV antenna.
- You can switch channels while recording if the channels share the same polarity. However, you cannot switch to a channel with a different polarity from the channel being recorded.



2. Two Separate Antennas Setting

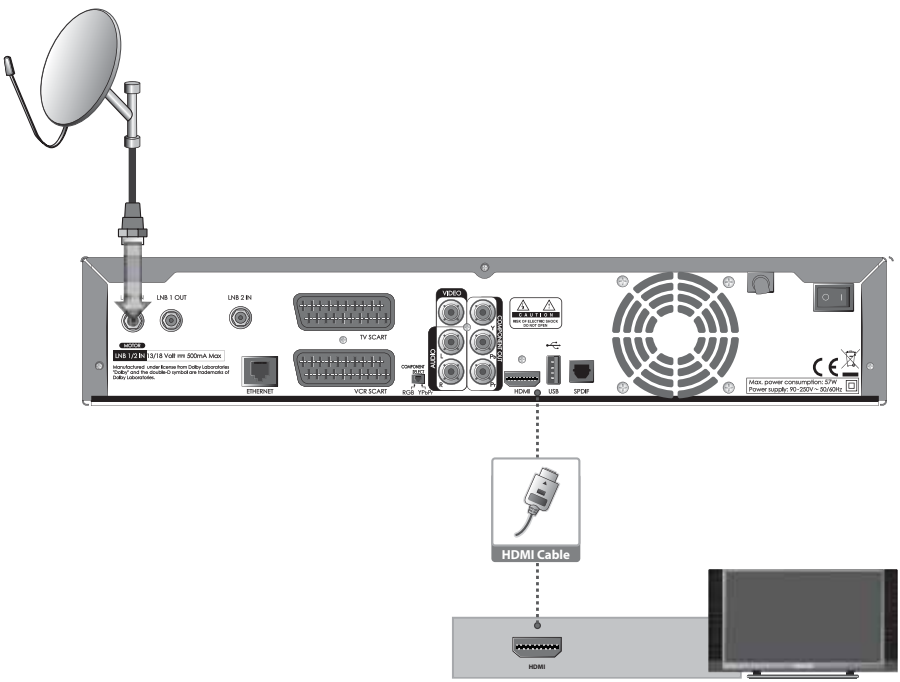
Connect the two antenna cables providing different broadcasting signals to your product. You can configure LNB 1 IN and LNB 2 IN dependently.



2.2 Connecting the TV and VCR

1. Using HDMI Cable

The HDMI connection is recommended for Digital TV. In case the TV has a HDMI input connector, a special all-digital interface that provides the highest picture quality, connect the product and the TV using a HDMI cable as follows.

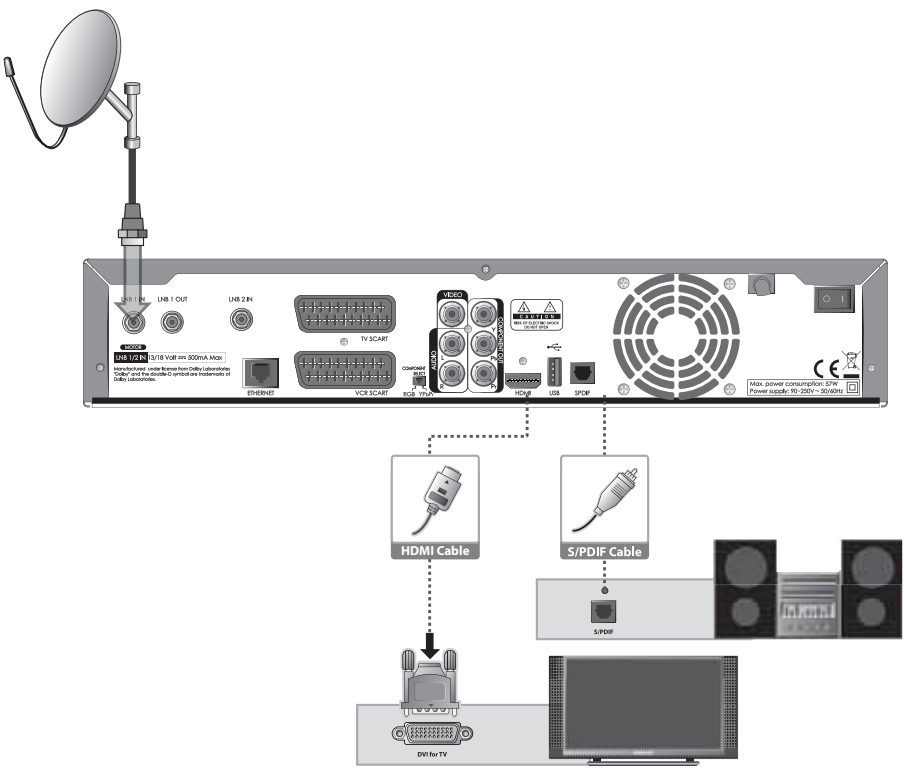


2. Using DVI Connector

The DVI connection using an HDMI to DVI converter is recommended for Digital TV. In case the TV has the DVI input connector only, connect the product to the TV with an HDMI cable using an HDMI to DVI converter as follows.

When equipped with an A/V receiver,

1. Connect one end of the HDMI cable to the HDMI input on the product and the other end to the HDMI to DVI converter.
2. Connect the DVI converter to the TV.
3. Connect the product and the Dolby Digital decoder using an S/PDIF cable.



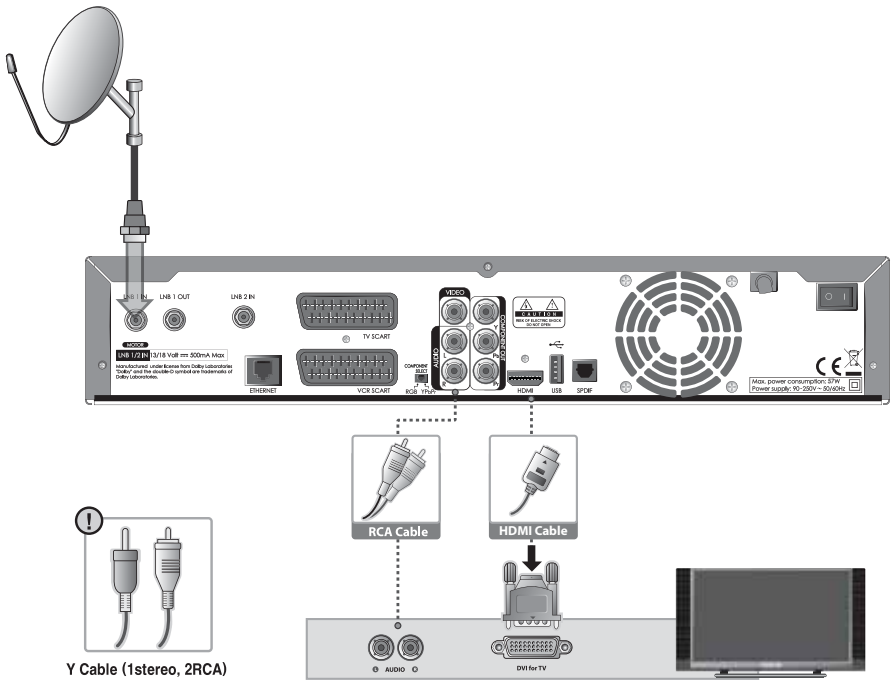
2. Setup

When there is no A/V receiver available,

1. Connect the product and the TV using an RCA cable.
2. Connect one end of the HDMI cable to the HDMI input on the product and the other end to the HDMI to DVI converter.
3. Connect the DVI converter to the TV.

Note: You can also connect the product to the TV using the ***3.5 Stereo Jack Cable to 2 RCA Y Cable***.

Caution: DO NOT CONNECT TO HEAD PHONE CONNECTOR ON TV!



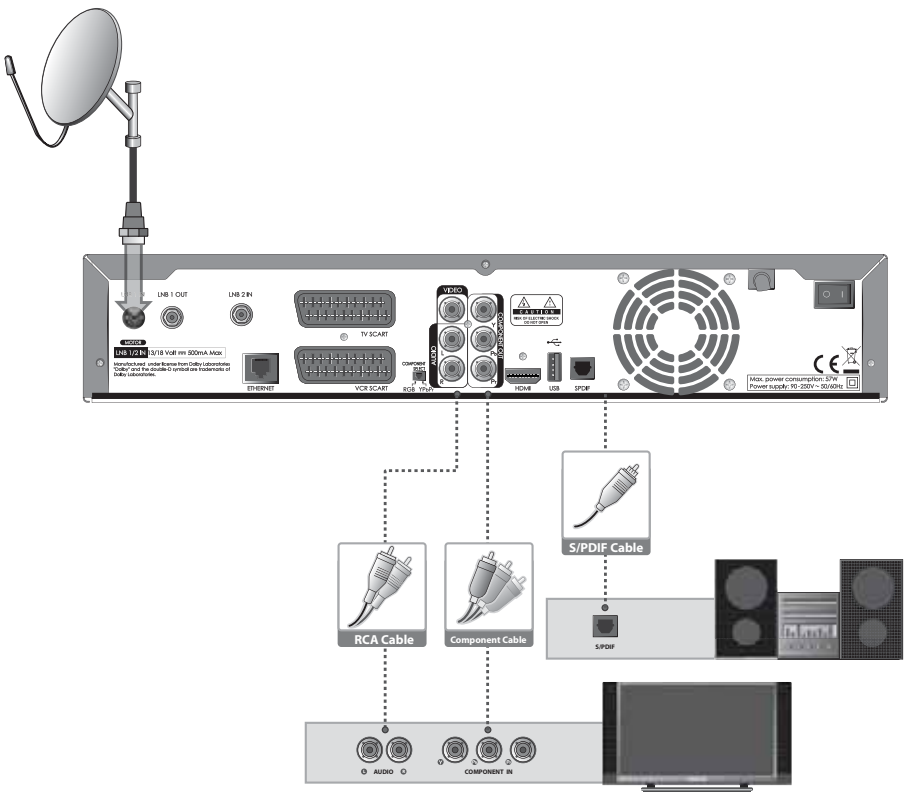
3. Using Component Cable

The component connection is recommended for Digital TV. Connect the product and the TV using a component cable as follows.

You can either:

- 1-1 Connect the product and the TV using an RCA cable (Audio L/R).
- 1-2 Connect the product and the Dolby Digital decoder using an S/PDIF cable.

Note: The Component Select switch should be on YPbPr when using the component cable.



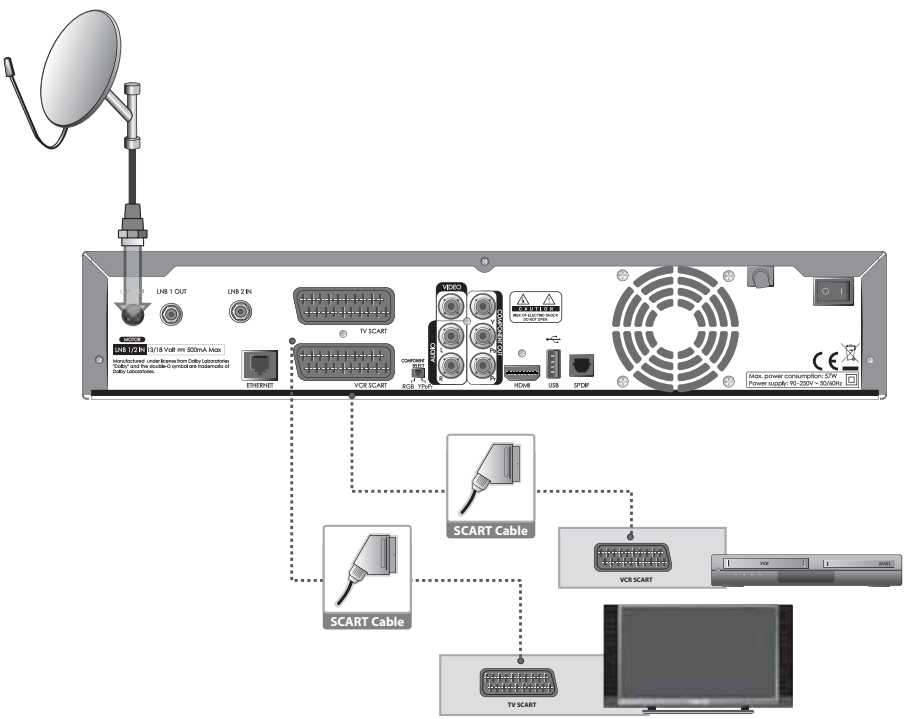
4. Using SCART Cable

A SCART cable connection is recommended for analogue TV or VCR.

1. Connect the product and the TV using a SCART cable.
2. Connect the product and the VCR using a SCART cable.

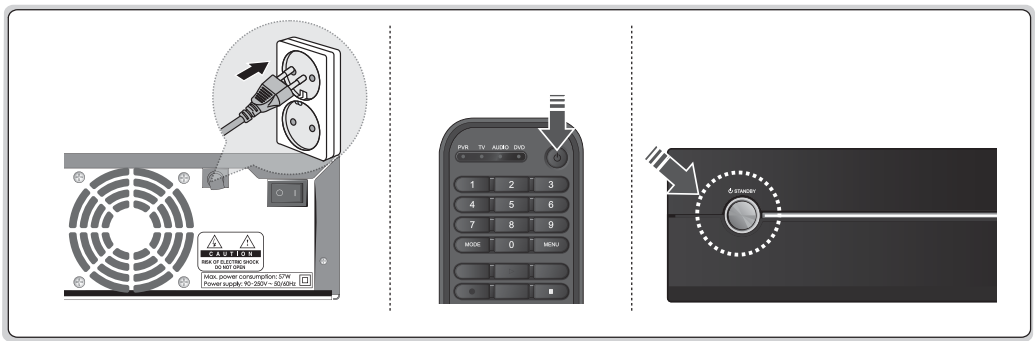
Note:

- Connecting your TV directly to the audio/video output of the product will assure a more vivid picture and enhance your viewing enjoyment.
- The Component Select switch should be on RGB when using the SCART cable.



2.3 Powering On

1. Connect the power cord of the product to a wall outlet.
2. Turn on the power switch located at the back left side of the product.
3. Power on by pressing the **STANDBY** button of the remote control or the **STANDBY** button at the front of the product.



3. Installation Wizard

When powering on your product for the first time after purchase, the installation wizard will operate automatically.

Tip:	The default password is **0000**. If you have forgotten your password, please contact your local product distributor.

3.1 Language

Language allows you to select the main language.

Select the appropriate language from the list. Press the **OK** button to save.

3.2 Time Region

Time Region allows you to set the country and the current time of your region.

Select ***Country*** and press the **OK** or ◄/► button to display the list of countries. Select the country and press the **OK** button.

If you have selected ***Other*** in ***Country***, select ***GMT Offset*** and press the **OK** or ◄/► button to display the time zone options. Select the appropriate time zone and press the **OK** button.

Select ***Daylight Saving Time*** and press the **OK** or ◄/► button to set the option if necessary.

Select ***Next*** and press the **OK** button.

3.3 Connection Type

Connection Type allows you to set the connection type of the antenna.

Select ***Connection Type*** and press the **OK** or ◄/► button to select from the antenna option.

Then select ***Next*** and press the **OK** button.

One Cable	Loop through, Motor, SCD Antenna
Two Cable (Same)	Same tuners
Two Cable (Different)	Different tuners

3 Connection Type
Connection Type
One Cable
If your antenna is a single cable system, motor or SMATV, skip this procedure and set your antenna in the installation menu.
Back
Next
Skip
Connection Type

3.4 Default Channels

Default Channels allows you to select the default channel list of each country.

The satellites of the default channel list which belong to the country you have selected will appear.

Select ***Yes*** and press the **OK** button to go to software update.

Select ***No*** and press the **OK** button to move to antenna setting.

4 Default Channels
Do you want to apply the default channels of the following satellite?
If the default channels are applied, you do not have to search your satellite.
Satellites : ASTRA 1 19.2E
Back
Yes
No
Default Channels

3.5 Antenna Setting

Antenna Setting allows you to configure the antenna setting parameters.

1. **Satellite:** Select the satellite and press the **OK** button.
2. **LNB Frequency:** Select the required LNB frequency and press the **OK** button.
3. **22kHz Tone:** Select ***Enable*** or ***Disable*** and press the **OK** button.
4. **DiSEqC Input:** Select the required ***DiSEqC input*** and press the **OK** button.
5. **LNB Power:** Select the required LNB power. When selecting High, a warning message will appear; select ***OK*** and press the **OK** button.
6. Select ***Next*** and press the **OK** button to proceed.
7. Select ***Add another satellite dish*** and press the **OK** button to add another satellite. You can add up to four satellites.
8. Select ***Search*** and press the **OK** button.

Note:

- If you cannot find the required LNB frequency from the list, select ***User Define*** and manually enter the frequency using the **NUMERIC(0-9)** buttons and press the **OK** button.
- When using Universal LNB, select ***Universal***. The 22kHz tone value will be disabled.

3.6 Channel Search

Channel Search will activate and the results will appear.

To stop the channel search, select ***Stop*** and press the **OK** button. Select ***Save*** and press the **OK** button to go to the next step.

3.7 Software Update

Software Update displays the software version and lets you choose to update the new software.

When new software is detected, you can choose to download the software immediately or save for later.

You can refuse software update if not needed. In case there is no software currently available, select ***Next*** and press the **OK** button to proceed to the next step.

Note: For more information about software update, refer to ***9.8 Software Update***.

3.8 Display

Display enables you to set the screen ratio, display format and resolution of the screen.

Select the value for ***Screen Ratio***, ***Display Format*** and ***Resolution***.

Select ***Next*** and press the **OK** button.

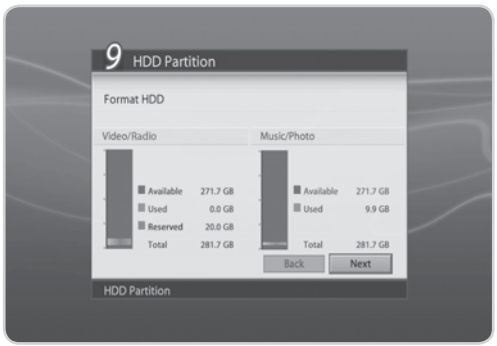
3.9 HDD Partition

HDD Partition enables you to view the current status of the Hard Disc Drive (HDD) storage and also format the HDD.

View the HDD storage status and select ***Next***.

To format the HDD, select ***Format HDD*** and press the **OK** button. A popup will appear.

Select ***Yes*** and press the **OK** button. You will be prompted to enter your password. Enter the password and assign the partition size. Select ***OK*** and press the **OK** button. Select ***Next*** and press the **OK** button.



3.10 Result

After all setting is complete, you can view the result screen.

Select ***Finish*** and press the **OK** button to complete the installation wizard.

3.11 Installation Checklist

Before using the product, please make sure that you have completed the following steps.

Step	Page	Done?
Are the antennas connected correctly?	GB16	
Is the product connected to your TV?	GB17	
Is the power cord plugged in the wall outlet?	GB22	
Is the power switch located at the back of the product switched on?	GB22	
Is the product in operation mode (not Standby mode)?	GB22	
Have you performed channel search in the installation wizard?	GB23	

Note: If you exit the installation wizard without fully completing the channel searching procedure, you may not have all of the channels available. In this case, you can use the installation menu to search for more channels.

4. Basic Operation

This chapter describes the basic functions the product provides such as switching channel, volume control and other common features.

4.1 Switching Channel

You can switch the current channel by pressing the **CH+-/CH-** button or entering the channel number directly using the **NUMERIC(0-9)** buttons. Press the **TV/RADIO** button to switch between TV channels and radio channels.

Note: You can switch channels using the channel list or TV guide. To return to the previous channel, press the **LAST** button.

4.2 Volume Control

You can adjust the audio volume. Press the **VOL+/ VOL-** button to adjust the audio volume. Press the **MUTE** button to stop the audio temporarily.

Note: The mute function remains set while you switch channels.

4.3 Resolution

You can set the resolution of the screen. Press the **V-FORMAT** button while watching a programme. The current resolution will be displayed.
Each time you press the **V-FORMAT** button, the resolution changes in the following sequence:
576i→576p→720p→1080i→Original

4.4 Sleep

You can set the automatic turn off time.

Press the **SLEEP** button while watching a programme to set the sleep time. Each time you press the **SLEEP** button, the sleep time changes in the following sequence: 10, 20, 30, 60, 90, 120 minutes.

4.5 Wide

You can set the display format.

Press the **WIDE** button while watching a programme to change the display format.
Each time you press the **WIDE** button, the display format changes.

Note: For more information about display format, refer to ***7.5.7 Display Format***.

Screen ratio 4:3			Screen ratio 16:9		
Format	**Icon and Text**		**Format**	**Icon and Text**	
Letterbox	Letterbox		Pillar box	Pillar box	
Pan & Scan	Pan & Scan		Pan & Scan	Pan & Scan	
Auto	Auto		Auto	Auto	

4.6 Audio

You can select the language you prefer in ***Audio*** if the current programme is available in multiple audio languages.

1. Press the **AUDIO** button.
2. Select the audio language you prefer.
3. Select audio direction (left, right, stereo) using the ◀/▶ button.
4. Press the **EXIT** button to close.

Note: If the programme is broadcast in Dolby Digital, you cannot set the audio direction.

4.7 Subtitle

can select the language for the subtitle if the programme provides subtitle information.

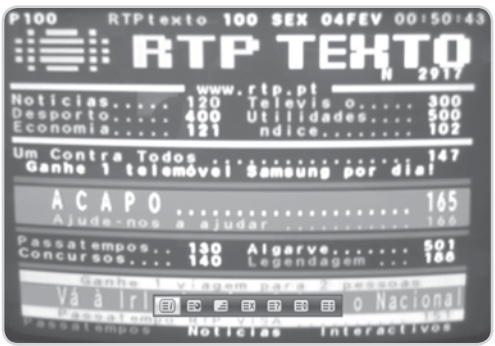
1. Press the **SUBTITLE** button.
2. Select the required subtitle language and press the **OK** button. The subtitle will be displayed in the selected language at the bottom of the screen.
3. Select ***Off*** from the subtitle language list to hide the subtitle from the screen.

Note: When there is no subtitle available, ***Off*** does not appear.

4.8 Teletext

You can use your TV remote control unit to control the teletext service. All teletext supporting channels have the teletext icon on the i-plate.

1. Press the **TELETEXT** button.
2. To display the teletext menu, press the **MENU** button in teletext mode.
3. Select the teletext function you want and press the **OK** button. To view the teletext page, use the **CH+/CH** or **NUMERIC(0-9)** buttons.



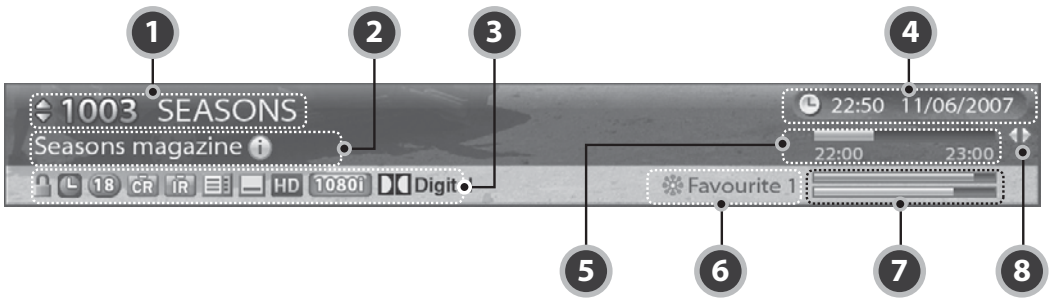
4.9 Programme Information (i-plate)

The i-plate is always displayed for a certain period of time whenever you switch channels. You can view the programme information by pressing the **i** button while watching a programme. Press the **EXIT** button to hide the **i**-plate.

After switching to a channel, press the ◄/► button to display navigation mode.
Press the ◄/► button to view the previous/next programme information.
Press the ▲/▼ button to view the programme information of other channels.

1. General Information

The general information is displayed on the screen as the following.



<i-plate Navigation mode>

1. Channel number and name
2. Programme name
3. Icons

	Displayed only when the channel is a locked channel.
	Displayed only if the programme is reserved for recording.
18	Represents parental level. Indicates the minimum level of age for viewing the programme.
CR IR	Displayed only when the channel is a scrambled channel.
	Displayed only when there is any teletext information.
	Displayed only when subtitle information is available.
HD	Displayed only when the channel provides HD programmes.
1080i	Displays the resolution of the current programme.
Digital	Displayed only when the programme is broadcast in Dolby Digital.

4. Current time & date
5. Programme broadcasting time and progress bar: Displays programme playing time and progress bar.
6. Group name: Displays the group the channel belongs to.
7. Signal icon, status: Displays the signal strength and quality.
8. Previous/Next programme information: Displayed if previous/next programme information is provided. Press the ◄/► button to display previous/next programme information.

Note: If there is no programme information available, programme information is not displayed.

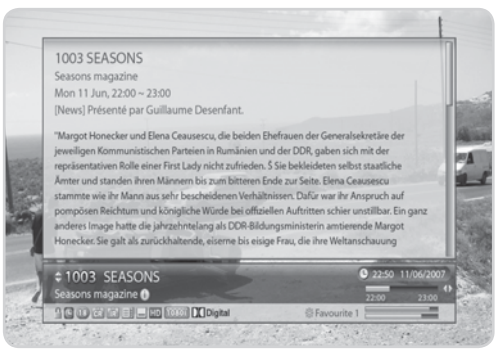
2. Detailed Programme Information

You can see the detailed information about the current programme.

Press the **i** button when the **i**-plate is displayed to view detailed information. Press the **i** button once more to hide the i-plate.

Note:

- If the detailed programme information is over one page, use the ▲/▼ button to move to the previous or next page.


1003 SEASONS
Seasons magazine
Mon 11 Jun, 22:00 ~ 23:00
[News] Présenté par Guillaume Desenfant.
"Margot Honecker und Elena Ceausescu, die beiden Ehefrauen der Generalsekretäre der jeweiligen Kommunistischen Parteien in Rumänien und der DDR, gaben sich mit der repräsentativen Rolle einer First Lady nicht zufrieden. S Sie bekleideten selbst staatliche Ämter und standen ihren Männern bis zum bitteren Ende zur Seite. Elena Ceausescu stammte wie ihr Mann aus sehr bescheidenen Verhältnissen. Dafür war ihr Anspruch auf pompösen Reichtum und königliche Würde bei offiziellen Auftritten schier unstillbar. Ein ganz anderes Image hatte die jahrzehntelang als DDR-Bildungsministerin amtierende Margot Honecker. Sie galt als zurückhaltende, eiserne bis eisige Frau, die ihre Weltanschauung
1003 SEASONS
Seasons magazine
22:50 11/06/2007
22:00
23:00
Digital
Favourite 1

5. Channel List

This chapter will help you manipulate the channel list. You can display the channel list by pressing the **OK** button while watching a programme.

Seven types of channel lists are provided for quick and easy channel search.

My TV (RED)	The list of all TV channels. • **Radio:** The list of all radio channels. • **HD TV:** The list of all HD TV channels. • **Recent Channels:** The list of the recently viewed channels.
Favourite (GREEN)	The list of the favourite channels in five groups. • **Auto Favourites:** The list of the most watched channels.
Satellite (YELLOW)	The lists of channels classified by satellites.
Scramble (BLUE)	The lists of channels classified by CAS types.

Note:
- Press the **EXIT** button to exit the channel list.
- The sub-groups of favourite channel list exist only after configuration.

5.1 My TV List

My TV List is the list of all channels available including both TV and radio channels.

1. Press the **OK** button while watching a programme to display the channel list.
2. Press the **RED** button while the channel list is displayed.
3. Select the channel you wish to view and press the **OK** button. You can also enter the channel number using the **NUMERIC(0-9)** buttons.
4. Press the **RED** button again or use ◀/▶ buttons to change the subgroup.

Note: You can switch between TV and radio by simply pressing the **TV/RADIO** button.

5. Channel List

1. Option

1. Select a channel and press the **OPT+** button.
2. To add the channel to the favourite group, select ***Favourite***. Select the group using the ◄/► button and press the **OK** button.
3. To lock the channel, select ***Lock*** and press the **OK** button.
4. To delete the channel, select ***Delete*** and press the **OK** button. A popup will appear. Select ***Yes*** and press the **OK** button.
5. To rename the channel, select ***Rename*** and press the **OK** button. Enter the name directly using the keyboard on the screen. Press the **YELLOW** button to complete.

2. Configuration

1. Press the **MENU** button.
2. To display the icon, enable ***Show Icon*** and press the **OK** button.
3. To display the channel number, enable ***Show Channel Number*** and press the **OK** button.
4. To change the list type, select from ***Simple***, ***One Column*** and ***Two Column*** and press the **OK** button.

5.2 Favourite List

Favourite List is the list of the favourite channels you can select yourself from the entire channel list. There are five favourite groups in total.

1. Press the **OK** button while watching a programme.
2. Press the **GREEN** button to display the list of favourite groups.
3. Press the **GREEN** button again and select a favourite group using the ◀/▶ button.

5.3 Satellite List

Satellite List is the list of channels included in the satellite you select.

1. Press the **OK** button while watching a programme.
2. Press the **YELLOW** button to display the satellite list.
3. Press the **YELLOW** button again and select a satellite list using the ◀/▶ button.

5.4 Scramble List

Scramble List is the list of channels included in the CAS you select.

1. Press the **OK** button while watching a programme.
2. Press the **BLUE** button to display the CAS list.
3. Press the **BLUE** button again and select a scramble list using the ◀/▶ button.

6. TV Guide

The ***TV Guide*** displays the programme information of each channel, in time and date order. You can customize your own programme guide to list the channels or programmes of interest to you and schedule your viewing using the programme information.

Note: Press the **GUIDE** or **EXIT** button to exit the TV guide screen.

6.1 Using TV Guide

You can view the programme information of all channels in time and date order.

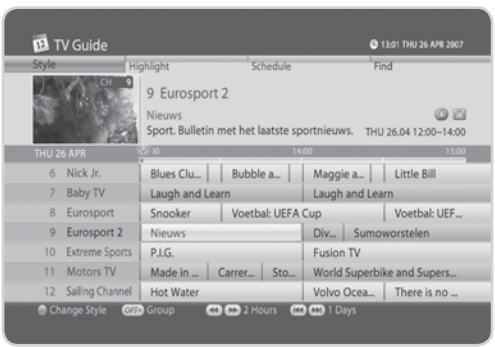
1. Press the **GUIDE** button.
2. Press the **RED** button.

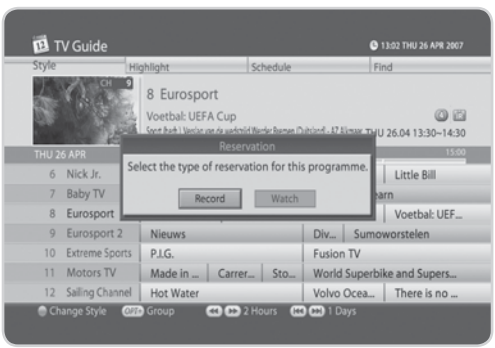
1. Grid Guide

1. Move to the previous/next programme within the same channel using the ◄/► button.
2. Move to another channel using the ▲/▼ button. If the contents are more than one page, use the **CH+/CH-** button to skip to the next page. Enter the number of the channel you wish to move using the **NUMERIC(0-9**) buttons.
3. Jump back/ahead two hours using the **FAST REWIND/FAST FORWARD** button.
4. Move to the previous/next day using the **PREVIOUS/NEXT** button.
5. Select the programme you want and press the **OK** button to play the programme in the PIG. Press the **OK** button again to view the programme.
6. You can reserve it if it is a future programme. Select a future programme and press the **OK** button to see the reservation popup. Select the reservation type.

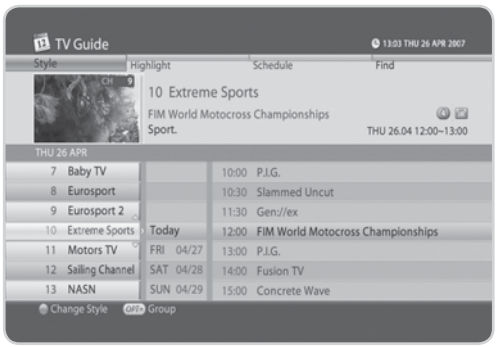
Record	Reserved for recording.
Watch	Reserved for watching.

7. Select a reserved programme and press the **OK** button to cancel the reservation.
8. Press the **OPT+** button to display the channel list. Select a channel to view the programme information of the chosen channel.





2. List Guide



Press the **RED** button to switch from grid guide to list guide.
You can view the programme information for approximately a week.
The features are similar as in grid guide.

Note:

- Press the **TV/RADIO** button to switch to TV or radio.
- You can reserve the programme after viewing the programme information.
- When reserving a series of programmes, a popup will appear. Select ***Whole Series*** or ***One Programme*** and press the **OK** button. Please note that reservation of series programmes always has priority to other reservations.

6.2 Highlights

Highlights display the programme information of the channels that are provided by TVTV EPG based on the date and time. You can look up programmes and make reservations with ease.

1. Press the **GUIDE** button.
2. Press the **GREEN** button to display the programme tips. The programmes are sorted in time order.
3. Select a future programme and press the **OK** button and then select ***Record*** or ***Watch***.

Record	Reserved for recording.
Watch	Reserved for watching.

4. Select a reserved programme and press the **OK** button to cancel the reservation.
5. Press the **GREEN** button again to change the genre.

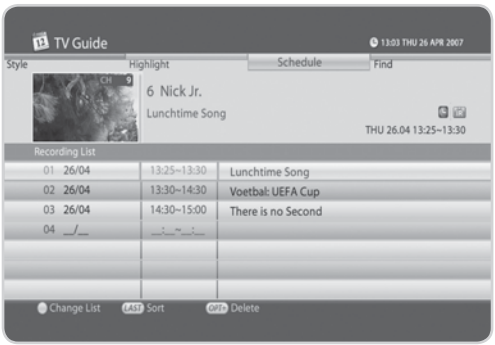
Note: Press the **LAST** button to sort the programmes in time or alphabetical order.

6.3 Schedule

Schedule displays the list of the programmes reserved. You can modify, delete or make new reservations.

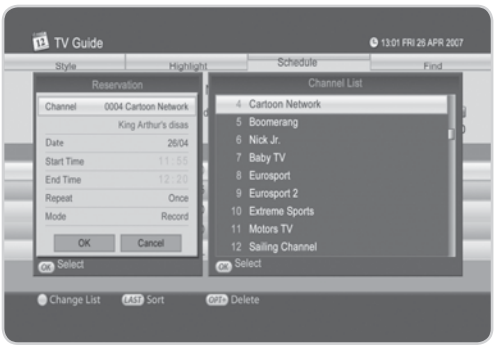
1. Press the **GUIDE** button.
2. Press the **YELLOW** button to display the schedule of reservations.
3. Press the **YELLOW** button again to switch from watching list to recording list.

Note: Press the **LAST** button to sort the list in time or alphabetical order.



1. Editing Reservations

1. Select a reservation you want to edit and press the **OK** button. The reservation popup will appear.
2. Select ***Channel*** and press the **OK** button to display the channel list. Select the channel.
3. Select ***Date*** and press the **OK** button to view the calendar. Select the date.
4. Select ***Start Time*** or ***End Time*** and enter the time using the **NUMERIC(0-9)** buttons.
5. Select ***Repeat*** and change the repeat frequency using the ◀/▶ button.
6. Select ***Mode*** and switch from ***Record*** to ***Watch***.
7. Select ***OK*** and press the **OK** button.



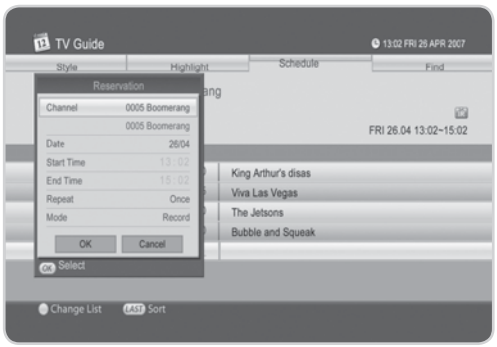
2. Deleting Reservations

1. Select a reservation you want to delete.
2. Press the **OPT+** button to delete the reservation.

3. New Reservation

1. Select a blank space and press the **OK** button.
2. The reservation popup will appear. Enter the channel number, date, start/end time, repeat frequency and mode and then press the **OK** button.

Note:
- Reservations for deleted channels or past programmes are automatically deleted.
- In case the channel number has changed, reservation has to be done again.



6.4 Find

Find enables you to find the programme you want by entering the genre, name, time and day of the programme.

1. Press the **GUIDE** button.
2. Press the **BLUE** button to find programme.
3. Enter the keyword, genre, time & day of the programme and select ***Search*** and then press the **OK** button.

1. Search by Keyword

1. Press the **OK** button while the cursor is on ***Keyword***.
2. A keyboard will appear. Enter the keyword.
3. Select ***Language*** and choose the language of the keyword.
4. Select ***SMS*** to switch to SMS keyboard.
5. Press the **YELLOW** button to complete.

Note: Press the **LAST** button to display seven of the most recent keywords that have been entered.

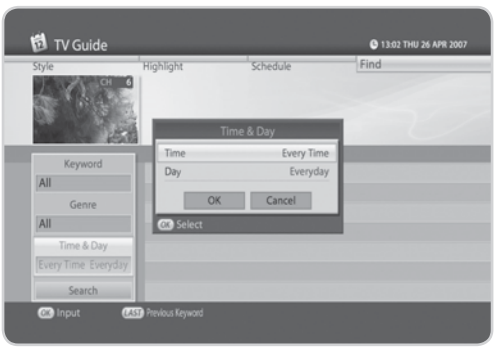
6. TV Guide

2. Search by Genre

1. Press the **OK** button while the cursor is on ***Genre***.
2. The list of genres will appear. Select a genre and press the **OK** button.

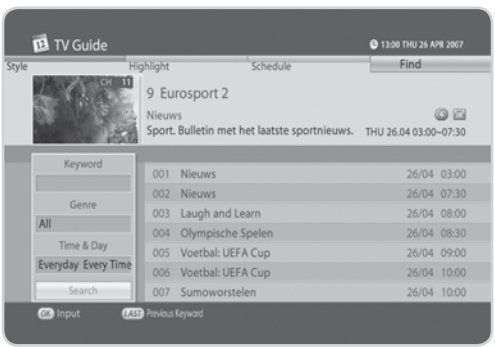
3. Search by Time and Day

1. Press the **OK** button while the cursor is on ***Time & Day***.
2. The time & day popup will appear. Select the time and day using the **OK** and ◄/► button.
3. Select ***OK*** and press the **OK** button.



4. Search Result

1. Select ***Search*** and press the **OK** button to proceed.
2. The search result of the entered values will appear.
3. To reserve a programme, select a future programme and press the **OK** button.
4. To search again, press the **BLUE** button.



7. Preferences

In this chapter you can set parental control, language setting, time setting, media setting, A/V setting and other configuration items to keep limitations where you want them for the viewers.

Note: Press the **EXIT** button to save the changes and return to the previous menu. Press the **MENU** button to exit the menu screen.

7.1 Parental Control

Parental Control allows you to set rating limits for each programme according to the age of the viewer or change your previous password. You can also lock the changes you have made using installation lock.

Tip:	The default password is **0000**.

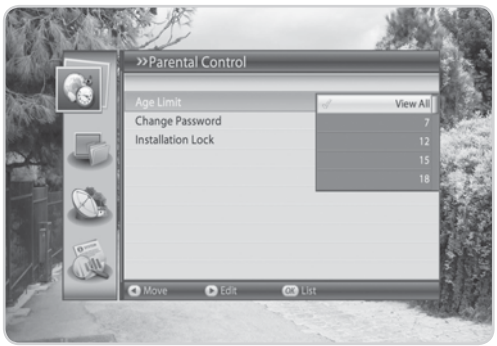
1. Press the **MENU** button.
2. Select ***Preferences*** using the ▲/▼ button and press the **OK** button.
3. Select ***Parental Control*** using the ▲/▼ button and press the **OK** button.
4. You will be prompted to enter your password. Enter the password using the **NUMERIC(0-9)** buttons.

1. Age Limit

Age Limit enables you to place certain restrictions on the viewers by setting age limits. The password is required to view the blocked programmes.

1. Select ***Age Limit*** and press the **OK** button.
2. Select the age limit you wish to set.

View All	All programmes can be watched. (No age limitation)
7, 12, 15, 18	Programmes are blocked for children under the age 7, 12, 15, 18.
Lock All	All programmes are blocked.



Note: You must enter your password to watch programmes blocked by the age restriction.

2. Change Password

Change Password allows you to change the current password.

1. Select ***Change Password*** and press the **OK** button.
2. Enter the password in ***New Password*** using the **NUMERIC(0-9)** buttons.
3. Enter the password again in ***Verify Password*** to confirm.

3. Installation Lock

Installation Lock allows you to block access to the installation menu settings you have previously made.

1. Select ***Installation Lock***.
2. Select ***Enable*** or ***Disable*** using the **OK** or ◄/► button.

7.2 Language Setting

Language Setting enables you to set the basic language and subtitle options such as menu language, subtitle display and subtitle font.

1. Press the **MENU** button.
2. Select ***Preferences*** using the ▲/▼ button and press the **OK** button.
3. Select ***Language Setting*** using the ▲/▼ button and press the **OK** button.

1. Menu Language

Menu Language allows you to choose from the given language options and set the language for the menu.

1. Select ***Menu Language*** and press the **OK** button.
2. Select the language you want and press the **OK** button.

2. Subtitle Display

Subtitle Display allows you to display the subtitle automatically. This service is provided when subtitles are available.

1. Select ***Subtitle Display***.
2. Select ***Auto*** or ***Manual*** using the **OK** or ◀/▶ button

Auto	Subtitles are displayed automatically in the predefined subtitle language.
Manual	Subtitles are displayed only when you press the **SUBTITLE** button and set subtitle.

3. Subtitle Font

Subtitle Font enables you to select the font of the subtitle.

1. Select ***Subtitle Font*** and press the **OK** button.
2. Select ***Variable*** or ***Fixed*** using the **OK** or ◀/▶ button

Variable	Uses the horizontally variable subtitle font of the on-screen display.
Fixed	Uses the fixed subtitle font as in teletext.

7.3 Time Setting

Time Setting allows you to set the current time and set the time you want to turn the product on or off.

1. Press the **MENU** button.
2. Select ***Preferences*** using the ▲/▼ button and press the **OK** button.
3. Select ***Time Setting*** using the ▲/▼ button and press the **OK** button.

1. Country

You can select the country that belongs to your time zone.

1. Select ***Country*** and press the **OK** button.
2. Select your country and press the **OK** button.

2. GMT Offset

If you have selected ***Other*** in ***Country***, enter the GMT Offset of your region in this menu.

1. Select ***GMT Offset*** and press the **OK** button.
2. Select the appropriate GMT offset value and press the **OK** button.

3. Daylight Saving Time

You can choose to apply the daylight saving time.

1. Select ***Daylight Saving Time*** and press the **OK** button.
2. Select ***Off*** or ***Auto*** and press the **OK** button.

4. Power On

You can set the time the product turns on automatically.

1. Select ***Power On***.
2. Enter the powering on time using the **NUMERIC(0-9)** buttons or select ***Disable*** using the **OK** or ◀/▶ button.

5. Power On Channel

You can select the channel to watch when the product turns on at the preset wakeup time.

1. Select ***Power On Channel*** and press the **OK** button to display the channel list.
2. Select the channel and press the **OK** button.

6. Power Off

You can select the time the product turns off automatically.

1. Select ***Power Off***.
2. Enter the powering off time using the **NUMERIC(0-9)** buttons or select ***Disable*** using the **OK** or ◀/▶ button.

7.4 Media Setting

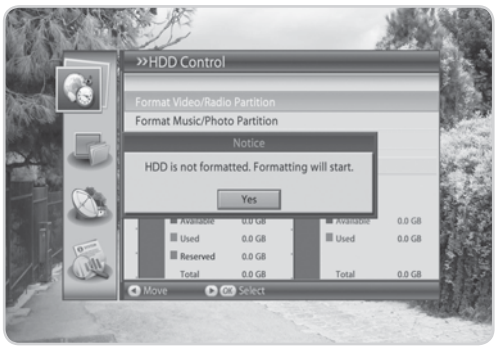
Tip: The default password is **0000**.

1. Press the **MENU** button.
2. Select ***Preferences*** using the ▲/▼ button and press the **OK** button.
3. Select ***Media Setting*** using the ▲/▼ button and press the **OK** button.

1. HDD Control

You can format the video/radio partition, music/photo partition or the hard disk drive.

1. Select ***HDD Control*** and press the **OK** button
2. To format the video/radio partition, select ***Format Video/Radio Partition*** and press the **OK** button. Enter the password to proceed.
3. To format the music/photo partition, select ***Format Music/Photo Partition*** and press the **OK** button. Enter the password to proceed.
4. To format the hard disk drive, select ***Format HDD*** and press the **OK** button. Enter the password and assign the partition size using the ◀/▶ button. Select ***OK*** and press the **OK** button.



2. USB Control

You can format the USB storage.

1. Select ***USB Control*** and press the **OK** button
2. To format the USB storage, select ***Delete all files*** and press the **OK** button. A popup will appear. Select ***Yes*** and press the **OK** button. You will be prompted to enter your password. Enter the password using the **NUMERIC(0-9)** buttons.

7.5 A/V Setting

You can configure the audio and video output settings.

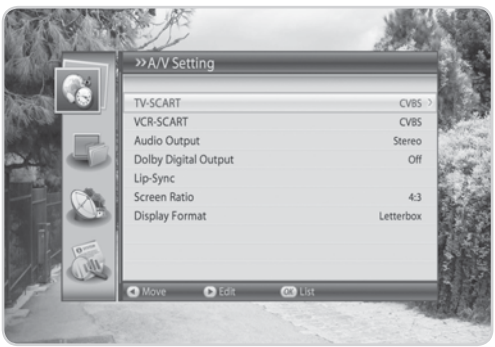
1. Press the **MENU** button.
2. Select ***Preferences*** using the ▲/▼ button and press the **OK** button.
3. Select ***A/V Setting*** using the ▲/▼ button and press the **OK** button.

1. TV SCART

You can select the TV SCART output option.

1. Select ***TV-SCART*** and press the **OK** button.
2. Select among ***CVBS, S-Video*** and ***RGB*** and press the **OK** button.

Note: You can select ***RGB*** only when the Component Select switch at the rear is on ***RGB***.



2. VCR SCART

You can select the VCR SCART output option.

1. Select ***VCR-SCART***.
2. Select ***CVBS*** or ***S-Video*** using the **OK** or ◄/► button.

7. Preferences

3. Audio Output

You can select the audio output option.

1. Select ***Audio Output***.
2. Select ***Stereo*** or ***Mono*** using the **OK** or ◄/► button.

4. Dolby Digital Output

You can set Dolby Digital automatically. If you select ***On***, Dolby Digital audio will be output via S/PDIF.

1. Select ***Dolby Digital Output***.
2. Select ***Off*** or ***On*** using the **OK** or ◄/► button.

5. Lip-Sync

You can adjust the sound difference of audio and video.

1. Select ***Lip-Sync*** and press the **OK** or ► button.
2. Adjust the sync using the ◄/► button.
3. Press the **LAST** button to complete.

Note: Lip-Sync is applied to all channels when once adjusted.

6. Screen Ratio

You can select the screen ratio option.

1. Select ***Screen Ratio***.
2. Select ***4:3*** or ***16:9*** using the **OK** or ◄/► button.

7. Display Format

You can select the display format according to the screen ratio.

1. Select ***Display Format*** and press the **OK** button.
2. When choosing ***4:3*** as screen ratio, select among ***Auto, Letter Box, Pan & Scan*** and press the **OK** button.
3. When choosing ***16:9*** as screen ration, select among ***Auto, Pillar Box, Pan & Scan*** and press the **OK** button.

Screen Ratio	4:3	16:9
Display Format	Letter Box, Pan & Scan, Auto	Pillar Box, Pan & Scan, Auto

7.6 Other Settings

You can configure other settings such as info display time, OSD transparency and TVTV EPG.

1. Press the **MENU** button.
2. Select ***Preferences*** using the ▲/▼ button and press the **OK** button.
3. Select ***Other Settings*** using the ▲/▼ button and press the **OK** button.

1. Info Display Time

You can set the automatic display time of the information box when the channel is switched.

1. Select ***Info Display Time*** and press the **OK** button.
2. Select a value between ***Disable, 1~ 20*** seconds and press the **OK** button.

Note: When set to ***Disable***, the ***i-plate*** will not be displayed when you switch the channel.

2. OSD Transparency

You can set the transparency of the On-Screen Display.

1. Select ***OSD Transparency*** and press the OK button.
2. Select among ***Disable, 25, 50*** and ***75*** and press the **OK** button.

Disable	Fully opaque screen
25, 50, 75	The bigger the number, the more transparent the screen.

3. TVTV EPG

You can choose to receive and display the TVTV EPG data.

1. Select ***TVTV EPG***.
2. Select ***Enable*** to display the TVTV EPG data prior to the standard data.

8. Edit Channels

In this chapter you can edit all channels in the channel list or make changes to the favourite lists of the channels you have chosen.

Note:

- Press the **EXIT** button to save the changes and return to the previous menu. Press the **MENU** button to exit the menu screen.
- Press the **TV/RADIO** button to move to TV or radio channel list directly.

8.1 Edit Channel List

Edit Channel List enables you to delete, move, select, rename or lock/unlock the channels in the channel list conveniently.

1. Press the **MENU** button.
2. Select ***Edit Channels*** using the ▲/▼ button and press the **OK** button.
3. Select ***Edit Channel List*** using the▲/▼ button and press the **OK** button.

1. Deleting Channels

1. Select the channels you want to delete and press the **OK** button. You can select more than one channel.
2. Press the **RED** button to delete the chosen channels.

2. Moving Channels

1. Select the channels you want to move and press the **OK** button. You can select more than one channel.
2. Press the **GREEN** button to move the chosen channels. The selected channel disappears from the channel list temporarily.
3. Move the cursor to the destination in the channel list and press the **OK** button.

Note:

- ***Move*** is available only for TV or radio channel lists.
- The channel number is changed by using ***Move*** function.

3. Selecting a Channel Group

1. Press the **YELLOW** button to display the list of groups.
2. Select the group you want and press the **OK** button.

8. Edit Channels

4. Renaming Channels

1. Select the channel you want to rename and press the **OK** button.
2. Press the **BLUE** button.
3. Select ***Rename*** and press the **OK** button.
4. Enter a channel name directly using the keyboard displayed on the screen.
5. Press the **YELLOW** button to complete.

5. Locking/Unlocking Channels

Tip:	The default password is **0000**.

1. Select the channel you want to lock and press the **OK** button.
2. Press the **BLUE** button.
3. Select ***Lock*** and press the **OK** button.

Note:

- When all selected channels are locked, ***Lock*** is switched into Unlock. When you press ***Unlock***, the locked channel is switched into an unlocked channel.
- To watch locked channels, you must enter the password using the **NUMERIC(0-9)** buttons.

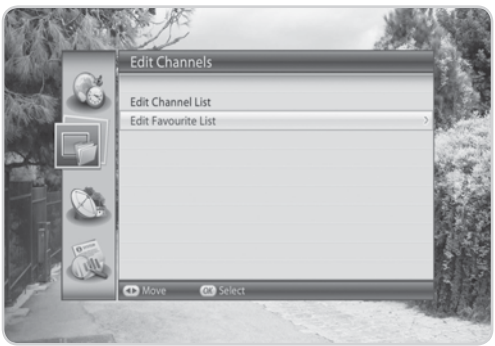
6. Select All/Release All

1. Press the **BLUE** button.
2. Select ***Select All*** and press the **OK** button.
3. To release one or more channels from select all, press the **OK** button while the cursor is on the selected channel.

8.2 Edit Favourite List

You can add or remove channels from the favourite groups, move favourite channels, rename favourite groups and move the favourite groups.

1. Press the **MENU** button.
2. Select ***Edit Channels*** using the ▲/▼ button and press the **OK** button.
3. Select ***Edit Favourite List*** using the ▲/▼ button and press the **OK** button.



1. Adding/Removing Channels

1. Select the channels you want to add to the favourite channel list and press the **OK** button.
2. Press the **RED** button to add the channels to the favourite list you have chosen.
3. To remove channels from the favourite list, select the channels from the list and press the **RED** button.

Note: When the cursor is on the left column, the red button is marked ***Add***; when the cursor moves to the right column, it becomes ***Remove***.

2. Selecting Favourite Groups

1. Press the **GREEN** button to display the list of groups.
2. Select the favourite group you want and press the **OK** button.

8. Edit Channels

3. Select All/Release All

1. Press the **YELLOW** button to select all channels in the favourite list.
2. To release all channels, press the **YELLOW** button again.

4. Renaming Favourite Groups

1. Select the favourite group you want to rename and press the **OK** button.
2. Press the **BLUE** button.
3. Select ***Rename Group*** and press the **OK** button.
4. A keyboard will appear. Enter the name of the favourite group using the keyboard.
5. Press the **YELLOW** button to complete.

Note: The **YELLOW** and **BLUE** buttons become activated only when the cursor is placed on the right column.

5. Moving Favourite Channels

1. Select the favourite channels to move within the favourite channel list and press the **OK** button.
2. Press the **BLUE** button.
3. Select ***Move*** and press the **OK** button.
4. Move the cursor to the destination using the ▲/▼ button, and press the **OK** button.
5. The selected channel is moved to the new location.

9. Installation

In this chapter you can configure the installation setting and perform channel search. Menus such as antenna setting, search channels, software update and default setting is included in this section.

Note: Press the **EXIT** button to save the changes and return to the previous menu. Press the **MENU** button to exit the menu screen.

9.1 Antenna Setting [Fixed]

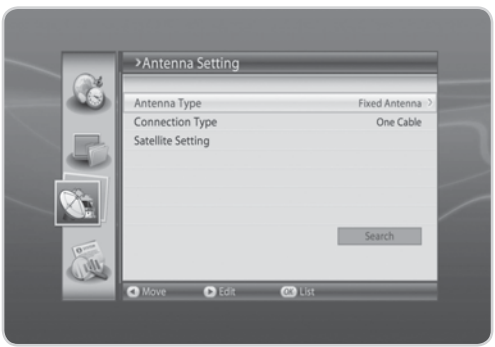
You can set the antenna and LNB information for channel search. If the antenna is not properly set, channel search cannot be activated which means you cannot watch any of the programmes on air.

MENU→Installation→Antenna Setting [Fixed]

1. Press the **MENU** button.
2. Select ***Installation*** using the ▲/▼ button and press the **OK** button.
3. Select ***Antenna Setting*** using the ▲/▼ button and press the **OK** button.

1. Antenna Type

1. Select ***Antenna Type*** and press the **OK** button.
2. Select among ***Fixed Antenna, SCD Antenna, Motor Antenna*** and ***SMATV*** and then press the **OK** button.



9. Installation

2. Connection Type

1. Select ***Connection Type*** and press the **OK** button.
2. When selecting ***Fixed Antenna*** in ***Antenna Type***, select among ***One Cable, Two Cable(Same)*** or ***Two Cable(Different)*** and press the **OK** button.
3. When selecting ***SCD Antenna***, ***Motor Antenna*** or **SMATV** in ***Antenna Type***, the ***Connection Type*** is set automatically to ***One Cable***.
4. Select ***Search*** and press the **OK** button to go to search channels.

3. Satellite Setting

1. Select ***Satellite Setting*** and press the **OK** button.
2. Enter the value for ***Satellite, LNB Frequency, 22kHz Tone, DiSEqC Input, LNB Power*** and ***Transponder***.
3. Select ***Save*** and press the **OK** button to complete.

Satellite

Select the satellite the antenna is pointing to and press the **OK** button. If the required satellite is not available, select ***User Define*** and enter the name of the satellite directly.

LNB Frequency

Select the LNB frequency value and press the **OK** button. If the required value is not available, select ***User Define*** and enter the LNB frequency directly.

Note: If you select ***Universal***, the ***22kHz Tone*** will be disabled.

22kHz Tone

Select ***Disable*** or ***Enable*** using the **OK** or ◄/► button.

Enable	Dual LNB is used or two antennas are connected to the 22kHz tone switch box.
Disable	22kHz tone is not in use.

DiSEqC Input

Select the DiSEqC input option and press the **OK** button.

LNB Power

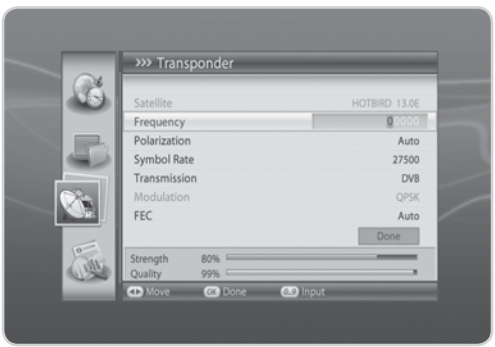
Select ***Standard*** or ***High*** and press the **OK** button.

Transponder

Set the transponder to check the signal status. Select the value for the transponder. If the required value is not available, select ***User Define*** and enter the transponder value directly.

4. Add Transponder

1. Select ***User Define*** in ***Transponder*** and press the **OK** button.
2. Enter the value for ***Frequency, Polarization, Symbol Rate, Transmission***, ***Modulation*** and ***FEC***.
3. Select ***Done*** and press the **OK** button to complete.



Frequency

Enter the frequency using the **NUMERIC(0-9)** buttons.

Polarization

Select among ***Auto, Horizontal*** and ***Vertical*** and press the **OK** button.

Symbol Rate

Select the symbol rate and press the **OK** button. If the required symbol rate is not available, select ***User Define*** and enter the symbol rate directly.

Transmission

Select ***DVB-S*** or ***DVB-S2*** and press the **OK** button.

Modulation

Select ***QPSK*** or ***8PSK*** and press the **OK** button.

FEC

Select the FEC value and press the **OK** button.

Note: When ***Transmission*** is set to ***DVB-S, Modulation*** is disabled. The values for ***Symbol Rate*** and ***FEC*** differ depending on the value of ***Modulation***. Refer to the table below.

Parameter	Value		
Transmission	**DVB-S**	**DVB-S2**	
Modulation	Disabled	QPSK	8PSK
Symbol Rate	2-45Ms/s	10-30Ms/s	10-31Ms/s
FEC	Auto, 1/2, 2/3, 3/4, 5/6, 7/8	Auto, 1/2, 2/3, 3/4, 3/5, 4/5, 5/6, 8/9, 9/10	Auto, 3/5, 2/3, 3/4, 5/6, 8/9, 9/10

9.2 Antenna Setting [SCD Antenna]

MENU→Installation→Antenna Setting [SCD Antenna]

SCD Antenna

Single Cable Distribution enables the delivery of broadcast programming over a single cable to multiple users eliminating the numerous cables required to support other electronics devices.
If you are using more than one satellite receiver, set one receiver at a time and turn off the others while setting. Refer to the satellite antenna manual for details.

1. Press the **MENU** button.
2. Select ***Installation*** using the ▲/▼ button and press the **OK** button.
3. Select ***Antenna Setting*** using the ▲/▼ button and press the **OK** button.
4. Select ***SCD Antenna*** in the ***Antenna Type*** menu.
5. The ***Connection Type*** is set automatically to ***One Cable***.
6. Enter the value for ***Tuner1, Band Frequency, Tuner2, Band Frequency*** and ***Satellite Setting***.
7. Select ***Search*** and press the **OK** button to go to search channels.

1. Tuner 1

Select from ***User Band 1-8*** and press the **OK** button.

2. Band Frequency

When selecting ***User Band 1-8*** in ***SCD Antenna***, the default value is displayed. Select the value and press the **OK** button. You can also enter the ***Band Frequency*** directly.

Note: If ***SCD Antenna*** is enabled, ***22kHz Tone*** and ***DiSEqC Input*** are disabled. When ***SCD Antenna*** is disabled, ***Band Frequency*** is also disabled.

3. Tuner 2

Select from ***User Band 1-8*** and press the **OK** button.

4. Band Frequency

When selecting ***User Band 1-8*** in ***SCD Antenna***, the default value is displayed. Select the value and press the **OK** button. You can also enter the ***Band Frequency*** directly.

5. Satellite Setting

1. Select ***Satellite Setting*** and press the **OK** button.
2. Enter the value for ***Satellite, LNB Frequency, LNB Power, Satellite Position*** and ***Transponder***.
3. Select ***Save*** and press the **OK** button to complete.

Satellite

Select the satellite the antenna is pointing to and press the **OK** button. If the required satellite is not available, select ***User Define*** and enter the name of the satellite directly.

LNB Frequency

Select the LNB frequency value and press the **OK** button. If the required value is not available, select ***User Define*** and enter the LNB frequency directly.

Note: If you select ***Universal***, the ***22kHz Tone*** will be disabled.

LNB Power

Select ***Standard*** or ***High*** and press the **OK** button.

Satellite Position

Select ***Position1*** or ***Position2*** and then press the **OK** button.

Transponder

Select the value for the transponer. If the required value is not available, select ***User Define*** and enter the transponder value directly.

9.3 Antenna Setting [Motor]

MENU→Installation→Antenna Setting [Motor]

1. Press the **MENU** button.
2. Select ***Installation*** using the ▲/▼ button and press the **OK** button.
3. Select ***Antenna Setting*** using the ▲/▼ button and press the **OK** button.
4. Select ***Motor Antenna*** in the ***Antenna Type*** menu.
5. The ***Connection Type*** is automatically set to ***One Cable***.
6. Select ***Satellite Setting*** and press the **OK** button.

1. Motor Setting

You can set the motor antenna for efficient channel search.

1. Select ***Motor Setting*** and press the **OK** button.
2. Enter the value for ***LNB Frequency, LNB Power, Motor Type, My Longitude*** and ***My Latitude***.

LNB Frequency

Select the LNB frequency value and press the **OK** button. If the required value is not available, select ***User Define*** and enter the LNB frequency directly.

Note: If you select ***Universal***, the ***22kHz Tone*** will be disabled.

LNB Power

Select ***Standard*** or ***High*** using the **OK** or ◄/► button.

Note: When ***LNB Power*** is set to ***High***, a popup appears;"High LNB Power. Only for LNB cable over 30m. Set LNB Power High."

Motor Type

Select ***DiSEqC 1.2*** or ***USALS*** using the **OK** or ◄/► button.

DiSEqC 1.2	General motor antenna using DiSEqC 1.2
USALS	Motor antenna using USALS.

Note: When ***Motor Type*** is set as ***DiSEqC 1.2***, both ***My Longitude*** and ***My Latitude*** are disabled.

My Longitude

Enter the longitude using the **NUMERIC(0-9)** buttons. Select ***East*** or ***West*** using the ◄/► button and press the **OK** button.

My Latitude

Enter the latitude using the **NUMERIC(0-9)** buttons. Select ***North*** or ***South*** using the ◄/► and press the **OK** button.

2. Edit Satellite Data

You can set the position of the satellite that the motor antenna is pointing to and decide whether to use the satellite.

1. Select ***Edit Satellite Data*** and press the **OK** button.
2. Enter the value for ***Satellite, Activate Satellite*** and ***Satellite Longitude***.
3. Select ***Save*** and press the ***OK*** button to save and return to the previous screen.

Satellite

Select a satellite to edit and press the **OK** button.

Activate Satellite

Select ***Disable*** or ***Enable*** using the **OK** or ◄/► button.

Enable	Channel search is available.
Disable	Current channel does not exist. Channel search unavailable.

Note: ***Activate Satellite*** is activated only when ***User define*** is selected in ***Satellite*** menu.

Satellite Longitude

Enter the longitude using the **NUMERIC(0-9)** buttons. Select ***East*** or ***West*** and press the **OK** button.

3. Position Setting

1. Select ***Position Setting*** using the ▲/▼ button.
2. Enter the value for ***Satellite, Transponder, Motor Driving,*** and **Driving Size**.

Satellite

Select the satellite the antenna is pointing to and press the **OK** button. If the required satellite is not available, select ***User Define*** and enter the name of the satellite directly.

Transponder

Select the value for the transponder. If the required value is not available, select ***User Define*** and enter the transponder value directly.

Motor Driving

1. Select among ***Continuous***, ***Step*** or ***Time*** and press the **OK** button.
2. When motor driving a set to ***Step*** or ***Time***, the ***Driving Size*** option is enabled. Select the driving size using the **OK** or ◄/► button.

Go to Stored Position

1. Press the **OK** button to move the antenna to the position of the selected satellite.
2. Wait until the antenna moves to the position of the satellite.
3. Confirm signal strength and quality level and fine-tune the antenna direction. Move the antenna East/ West by pressing the ◄/► button. Adjust the signal level to maximum.

Store Current Position

1. Press the **OK** button to save the adjusted position of the satellite.
2. The position of the antenna headed for the certain satellite will be saved.

Note: You can set the antenna position by repeating the procedure above.

Recalculate

1. Press the **OK** button to recalculate the position of the satellites based on one satellite.
2. To readjust all positions, select ***Yes*** and press the **OK** button.

Note: When ***Motor Type*** is set as ***USALS, Motor Driving, Store Current Position*** and ***Recalculate*** are disabled.

4. Limit Setting

You can set the default setting and operation limit for the motor antenna.

1. Select ***Limit Setting*** and press the **OK** button.
2. Enter the value for ***Motor Limit*** and ***Limit Position***.

Motor Limit

You can set the maximum motor limit for both East and West to prevent damage to the antenna.
Select ***Off*** or ***On*** using the **OK** or ◄/► button.

Off	Motor limit setting is released.
On	Motor limit is set. Motor does not exceed the limit.

Note: Select ***Off*** when setting a new motor limit.

Limit Position

Select ***East*** or ***West*** using the **OK** or ◄/► button.

East	Sets East limit.
West	Sets West limit.

Set Limit

1. Press the **OK** button.
2. Move the antenna to the East or West using the ◀/▶ button.

Note: When the limit is set, **Motor Limit** is automatically enabled.

Reset Position

1. Press the **OK** button to restore the position saved at the motor antenna to factory default.
2. A popup will appear. Select ***OK*** and press the **OK** button to reset all values saved at motor antenna to factory default.

Note: Reset may not activate depending on the condition of the antenna. Repeat the procedure above if necessary.

9.4 Antenna Setting [SMATV]

MENU→Installation→Antenna Setting [SMATV]

1. Press the **MENU** button.
2. Select ***Installation*** using the ▲/▼ button and press the **OK** button.
3. Select ***Antenna Setting*** using the ▲/▼ button and press the **OK** button.
4. Select ***SMATV*** in the ***Antenna Type*** menu.
5. The ***Connection Type*** is automatically set to ***One Cable***.
6. Select ***Search*** and press the **OK** button.

9.5 Search Channels [Fixed/SCD Antenna/Motor]

MENU→Installation→Search Channels [Fixed/ SCD Antenna/Motor]

1. Press the **MENU** button.
2. Select ***Installation*** using the ▲/▼ button and press the **OK** button.
3. Select ***Search Channels*** using the ▲/▼ button and press the **OK** button.

1. Fixed Antenna Search

The ***Antenna Type*** is set to ***Fixed Antenna*** in ***Antenna Setting*** menu.

Antenna

Select ***All*** or the name of the satellite in antenna setting.

Transponder

Select ***All*** or the value in the transponder list and press the **OK** button. If the required value is not available, select ***User Define*** and enter the transponder value directly.

Network Search

Select ***Disable*** or ***Enable*** using the **OK** or ◀/▶ button.

Scrambled Type

Select among ***All***, ***FTA*** and ***CAS*** and press the **OK** button.

Channel Type

Select among ***All, TV*** and ***Radio*** and press the **OK** button.

9.6 Search Channels [SMATV-Auto]

MENU→Installation→Search Channels [SMATV-Auto]

SMATV allows you to perform channel search regardless of the setting value in antenna setting.

1. Press the **MENU** button.
2. Select ***Installation*** using the ▲/▼ button and press the **OK** button.
3. Select ***Search Channels*** using the ▲/▼ button and press the **OK** button.

1. Search Type

1. Select ***Search Type***.
2. Select ***Auto*** using the **OK** or ◄/► button.

2. Start Frequency

1. Select ***Start Frequency***.
2. Enter the start frequency using the **NUMERIC(0-9)** buttons.

Note: Enter the frequency from 950 to 2150 MHz.

3. End Frequency

1. Select ***End Frequency***.
2. Enter the end frequency using the **NUMERIC(0-9)** buttons.

Note: Enter the frequency from 950 to 2150 MHz.

4. Symbol Rate (1)-(4)

1. Select ***Symbol Rate (1)-(4)*** and press the **OK** button.
2. Select the symbol rate and press the **OK** button. If the required value is not available, select ***User Define*** and enter the symbol rate directly.

9.7 Search Channels [SMATV-Manual]

MENU→Installation→Search Channels [SMATV-Manual]

1. Press the **MENU** button.
2. Select ***Installation*** using the ▲/▼ button and press the **OK** button.
3. Select ***Search Channels*** using the ▲/▼ button and press the **OK** button.

1. Search Type

1. Select ***Search Type***.
2. Select ***Manual*** using the **OK** or ◄/► button.

2. Frequency

Select ***Frequency*** and enter the frequency using the **NUMERIC(0-9)** buttons.

Note: Enter the frequency from 950 to 2150 MHz.

3. Symbol Rate

1. Select ***Symbol Rate*** and press the **OK** button.
2. Select the symbol rate and press the **OK** button. If the required value is not available, select ***User Define*** and enter the symbol rate directly.

4. FEC

1. Select ***FEC*** and press the **OK** button.
2. Select ***Auto*** or the FEC and press the **OK** button.

5. Search Result

1. Select ***Search*** and press the **OK** button. The channel search will start.
2. To stop the search, press the **OK** button during channel search.
3. The results will appear. Select ***Save*** and press the **OK** button.

Note: If there are no channels available, a message indicating the result will pop up.

9.8 Software Update

Software Update allows you to update the system software.

MENU→Installation→Software Update

1. Press the **MENU** button.
2. Select ***Installation*** using the button and press the **OK** button.
3. Select ***Software Update*** using the button and press the **OK** button.

1. Automatic Update

1. Select ***Automatic Update*** and press the **OK** button.
2. When new software is detected, you can choose to download the software immediately or save for later.
3. When there is no new software to update, a popup will appear.

2. Manual Update

1. Select ***Manual Update*** and press the **OK** button.
2. Enter the values for ***Satellite, Frequency, Polarization, Symbol Rate*** and ***FEC***.
3. Select ***Search*** and press the **OK** button.
4. When new software is detected, you can choose to download the software immediately or save for later.

Note: When there is no new software to update, a popup will appear.

Satellite

Select the name of the satellite in antenna setting.

Frequency

Enter the frequency using the **NUMERIC(0-9)** buttons.

Polarisation

Select one option among ***Auto, Horizontal*** and ***Vertical*** and press the **OK** button.

Symbol Rate

Select one option among ***27500, 26000*** and ***22000*** and press the **OK** button. If the required value does not exist, select ***User Define*** and enter the symbol rate directly.

FEC

Select one option among ***Auto, 1/2, 2/3, 3/4, 5/6*** and ***7/8*** and press the **OK** button.

9.9 Default Setting

Default Setting enables you to restore the product to the factory default.

MENU→Installation→Default Setting

Warning: Please note that once you perform ***Default Setting***, all data such as antenna setting information, channel list, and all user configured data will be deleted.

1. Press the **MENU** button.
2. Select ***Installation*** using the ▲/▼ button, and press the **OK** button.
3. Select ***Default Setting*** using the ▲/▼button and press the **OK** button.
4. Select ***Yes*** and press the **OK** button to restore all setting to factory default. To return to the previous menu, select ***No*** and press the **OK**.
5. You will be prompted to enter your password again before starting to load default setting. Enter the password to proceed.
6. When default setting is completed, installation wizard pops up automatically and assists channel search.

Tip: The default password is **0000**.

Note: For detailed information about the installation wizard, refer to ***Chapter 3. Installation Wizard***.

10. System

10.1 Status

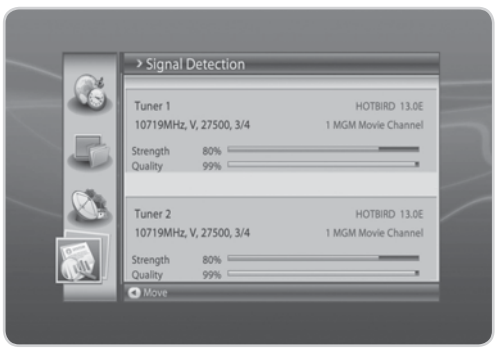
You can view the model name, software version, loader version, system ID, update date, Micom version and MAC address of the product. The Smartcards of each Smartcard slot is also displayed.

1. Press the **MENU** button.
2. Select ***Status*** and press the **OK** button.
3. The system status information will be displayed.

10.2 Signal Detection

You can view the satellite, transponder information, signal strength and quality of the two tuners.

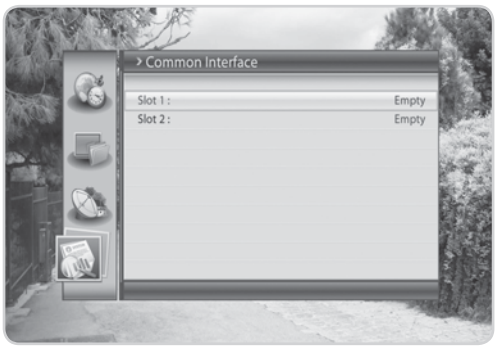
1. Press the **MENU** button.
2. Select ***Signal Detection*** and press the **OK** button.
3. The information of the two tuners will be displayed.



10.3 Common Interface

You can view the CI-Module information.

1. Press the **MENU** button.
2. Select ***Common Interface*** and press the **OK** button.
3. The common interface information will be displayed.
4. Select the slot you want to view the information of and press the **OK** or ▶ button.



11. Media List

There are four types of lists for different kinds of media files. You can display each list by pressing the colour buttons on the remote control. Press the **MEDIA** button. The media list will apper.

Video (RED)	The recorded file list
Radio (GREEN)	The radio file list
Music (YELLOW)	The music file list
Photo (BLUE)	The photo file list

11.1 Video

Press the **RED** button while displaying the media list to display the recorded file list. The recorded file list is displayed as the following.

1. First group name
2. Path of present folder
3. Icon of parent folder
4. Icon of folder
5. Thumbnail of recording
6. Icon of file in play list
7. Key help
8. Second group name of storage
9. Used size of HDD or USB storage
10. File name, time, date, duration
11. Icon of recording file
12. HD, CAS icon
13. Block picture

Note:

- Press the **LAST** button to sort the files by name or time.
- The icon (▶) will be displayed when the file is being played.
- When a USB memory stick or external HDD is connected to the USB host, the title of the group becomes USB. Use the colour keys to access the ***USB*** of each mode.

11. Media List

1. Play Option

1. Select a recorded file you want to playback and press the **OK** button. A popup will appear to display the play option.
2. Select ***Play from the start*** and press the **OK** button to play the recorded file from the beginning.
3. Select ***Play at the last played position*** and press the **OK** button to play the recorded file from the point it has been stopped.
4. Select ***Descramble a file*** and press the **OK** button to close the media list and descramble the file.
5. Select ***View play list*** and press the **OK** button to view the play list of the current folder.
6. Select ***Delete a file*** and press the **OK** button to delete the file. Select ***Yes*** and press the **OK** button.
7. Select a still image and press the ◄/► button to select the chapter you wish to view.

Note:

- If the file you have selected is a scrambled file, select ***Descramble a File***.
- When time delay occurs, you may not be able to descramble or play the scrambled file.
- A chapter is made automatically by dividing a file into eight smaller files and capturing a still image of each smaller file. Chapters are used in play option and in normal playback by pressing the **PREVIOUS** and **NEXT** buttons.

2. Play List

Video
Radio
Music
Photo
Play List
111 Prision Break - Episode 1 (10:00 04/23)
112 Prision Break - Episode 2 (10:00 04/24)
113 Prision Break - Episode 3 (10:00 04/25)
114 Prision Break - Episode 4 (10:00 04/26)
115 Prision Break - Episode 5 (10:00 04/28)
116 Prision Break - Episode 6 (10:00 04/29)
117 Prision Break - Episode 7 (10:00 04/30)
118 Prision Break - Episode 8 (10:00 05/01)
119 Prision Break - Episode 9 (10:00 05/02)
Delete
Move
Done
Subgroup
Option
Edit
Sort

1. Select ***View play list*** in ***Play Option*** or select ***Make List*** in edit mode and press the **OK** button.
2. Select a file in the playlist and press the **OK** button to play the selected file.
3. Press the **RED** button to delete the file and renumber the list.
4. Press the **GREEN** button to move the file within the list. Press the **OK** button to complete.

11. Media List

3. Option

1. Select a file in the video list and press the **OPT+** button.
2. To lock the file, select ***Lock*** and press the **OK** button. When unlocking a locked file, you will be prompted to enter your password. Enter the password and press the **OK** button.
3. To delete the file, select ***Delete*** and press the **OK** button. A popup will appear. Select ***Yes*** and press the **OK** button.
4. To rename the file, select ***Rename*** and enter the name directly using the keyboard displayed on the screen. Press the **YELLOW** button to complete.
5. To move the file to another folder, select ***Move*** and press the **OK** button. The list of folders will appear. Select the folder you want to move the file to and move it. Press the **OK** button to complete.

Tip:	The default password is **0000**.

4. Edit Mode

You can edit more than one file at the same time using edit mode.

1. Press the **EDIT** button while displaying the video list.
2. Select the files to edit and press the **OK** button.
3. To delete a file, press the **RED** button. A popup will appear. Press the **OK** button. When deleting a locked file, you will be prompted to enter your password. Enter the password and press the **OK** button.
4. To make a playlist of the selected files, press the **GREEN** button.
5. To move the file to another folder, press the **YELLOW** button. The list of folders will appear. Select the folder you want to move the file to and move it. Press the **OK** button to complete.
6. To make a folder, press the **BLUE** button. Enter the name of the folder in the keyboard displayed and press the **YELLOW** button.
7. To lock files, press the **OPT+** button. Select ***Lock*** and press the ***OK*** button. When unlocking a locked file, you will be prompted to enter your password. Enter the password and press the **OK** button.
8. To rename files, press the **OPT+** button. Select ***Rename*** and enter the name directly using the keyboard displayed on the screen. Press the **YELLOW** button to complete.
9. To select/release all files, press the **OPT+** button. Select ***Select All*** or ***Release All*** and press the **OK** button.

Note: When deleting or moving a locked file, you will be prompted to enter your password. Enter the password using the **NUMERIC(0-9)** buttons.

Tip:	The default password is **0000**.

11. Media List

11.2 Radio

Press the **GREEN** button while displaying the media list to display the radio list. The radio list is similar to the video list.

1. Play Option

1. Select a file you want to playback and press the **OK** button. A popup will appear to display the play option.
2. Select ***Play from the start*** and press the **OK** button to play the file from the beginning.
3. Select ***Play at the last played position*** and press the **OK** button to play the file from the point it has been stopped.
4. Select ***View play list*** and press the **OK** button to view the play list of the current folder.
5. Select ***Delete a file*** and press the **OK** button to delete the file. Select ***Yes*** and press the **OK** button.

2. Play List

1. Select ***View play list*** in ***Play Option*** or select ***Make List*** in edit mode and press the **OK** button.
2. Select a file in the playlist and press the **OK** button to play the selected file.
3. Press the **RED** button to delete the file and renumber the list.
4. Press the **GREEN** button to move the file within the list. Press the **OK** button to complete.

3. Option

1. Select a file in the radio list and press the **OPT+** button.
2. To lock the file, select ***Lock*** and press the **OK** button. When unlocking a locked file, you will be prompted to enter your password. Enter the password and press the **OK** button.
3. To delete the file, select ***Delete*** and press the **OK** button. A popup will appear. Select ***Yes*** and press the **OK** button.
4. To rename the file, select ***Rename*** and enter the name directly using the keyboard displayed on the screen. Press the **YELLOW** button to complete.
5. To move the file to another folder, select **Move** and press the **OK** button. The list of folders will appear. Select the folder you want to move the file to and move it. Press the **OK** button to complete.

4. Edit Mode

You can edit more than one file at the same time using edit mode.

1. Press the **EDIT** button while displaying the radio list.
2. Select the files to edit and then press the **OK** button.
3. To delete files, press the **RED** button. A popup will appear. Press the **OK** button.
4. To make a playlist, press the **GREEN** button to make a playlist of the selected files.
5. To move files to another folder, press the **YELLOW** button. The list of folders will appear. Select the folder you want to move the file to and move it. Press the **OK** button to complete.
6. To make a folder, press the **BLUE** button. Enter the name of the folder in the keyboard and press the **YELLOW** button.
7. To lock files, press the **OPT+** button. Select ***Lock*** and press the **OK** button. When unlocking a locked file, you will be prompted to enter your password. Enter the password and press the **OK** button.
8. To rename files, press the **OPT+** button. Select ***Rename*** and enter the name directly using the keyboard displayed on the screen. Press the **YELLOW** button to complete.
9. To select/release all files, press the **OPT+** button. Select ***Select All*** or ***Release All*** and press the **OK** button.

11. Media List

11.3 Music

Press the **YELLOW** button while displaying the media list to display the music file list. The music file list is displayed as the following.

1. First group name
2. Path of present folder
3. Icon of parent folder
4. Key help
5. Second group name of storage
6. Used size of HDD or USB storage

1. Play Option

1. Select a music file you want to play and press the **OK** button. A popup will appear to display the play option.
2. Select ***Play music file*** and press the **OK** button to play the music file.
3. Select ***View play list*** and press the **OK** button to view the play list of the current folder.
4. Select ***Delete a file*** and press the **OK** button to delete the file. Select ***Yes*** and press the **OK** button.

11. Media List

2. Music Player

1. Select the music file you want and press the **PLAY** button to play.
2. Press the **STOP** button to stop playing.
3. Press the **PAUSE** button to pause.
4. To play the previous/next music file, us the **FAST FORWARD/FAST REWIND** button.
5. Press the ▼ button or **OK** button to display the play list.
6. Use the **OPT+** button to repeat or shuffle.

11:49 / 12:16
Whatever Will Be Will Be(Que Sera Sera).mp3
Music
114 Sugarbush.mp3 3:54
115 Ready Willing And Able.mp3 4:21
116 April In Paris.mp3 6:21
117 My Love And Devotion.mp3 3:53
118 Whatever Will Be Will Be(Que Sera Sera).mp3 3:17
119 Doris Day -My Love And Devotion.mp3 3:54
120 Keren Ann - 01 - Not Going Anywhere.mp3 4:21
121 Nodame Cantabile OST.mp3 3:00
122 TWIN DORAGON.mp3 2:55
123 01-Ooh La la.mp3 1:20

3. Option

1. Press the **OPT+** button while displaying the music list.
2. To delete the file, select ***Delete*** and press the **OK** button. A popup will appear. Select ***Yes*** and press the **OK** button.
3. To rename the file, select ***Rename*** and enter the name directly using the keyboard displayed on the screen. Press the **YELLOW** button to complete.
4. To move the file to another folder, select ***Move*** and press the **OK** button. The list of folders will appear. Select the folder you want to move the file to and move it. Press the **OK** button to complete.

4. Edit Mode

1. Press the **EDIT** button while displaying the music list.
2. Select the files to edit and press the **OK** button.
3. To delete a file, press the **RED** button. A popup will appear. Select ***Yes*** and press the **OK** button. When deleting a locked file, you will be prompted to enter your password. Enter the password and press the **OK** button.
4. To make a playlist of the selected files, press the **GREEN** button.
5. To move the file to another folder, press the **YELLOW** button. The list of folders will appear. Select the folder you want to move the file to and move it. Press the **OK** button to complete.
6. To make a folder, press the **BLUE** button. Enter the name of the folder in the keyboard and press the **YELLOW** button.
7. To rename files, press the **OPT+** button. Select ***Rename*** and enter the name directly using the keyboard displayed on the screen. Press the **YELLOW** button to complete.
8. To select/release all files, press the **OPT+** button. Select ***Select All*** or ***Release All*** and press the **OK** button.

Tip:	The default password is **0000**.

5. File Information

Press the Info button while playing a music file to view the file information.

11.4 Photo

Press the **BLUE** button while displaying the media list to display the photo file list. The photo file list is similar to the music file list.

1. Play Option

1. Select a photo file you want to view and press the **OK** button. A popup will appear to display the play option.
2. Select ***View photo*** and press the **OK** button to view the photo file.
3. Select ***View slide show*** and press the **OK** button to view the photo in slide show.
4. Select ***Delete a file*** and press the **OK** button to delete the file. Select ***Yes*** and press the **OK** button.

2. Option

1. Press the **OPT+** button while displaying the photo list.
2. To delete the file, select ***Delete*** and press the **OK** button. A popup will appear. Select ***Yes*** and press the **OK** button.
3. To rename the file, select ***Rename*** and enter the name directly using the keyboard displayed on the screen. Press the **YELLOW** button to complete.
4. To move the file to another folder, select ***Move*** and press the **OK** button. The list of folders will appear. Select the folder you want to move the file to and move it. Press the **OK** button to complete.

3. Edit Mode

1. Press the **EDIT** button while displaying the photo list.
2. Select the files to edit and press the **OK** button.
3. To delete a file, press the **RED** button. A popup will appear. Select ***Yes*** and press the **OK** button. When deleting a locked file, you will be prompted to enter your password. Enter the password and press the **OK** button.
4. To move the file to another folder, press the **YELLOW** button. The list of folders will appear. Select the folder you want to move the file to and move it. Press the **OK** button to complete.
5. To make a folder, press the **BLUE** button. Enter the name of the folder in the keyboard and press the **YELLOW** button.
6. To rename files, press the **OPT+** button. Select ***Rename*** and enter the name directly using the keyboard displayed on the screen. Press the **YELLOW** button to complete.
7. To select/release all files, press the **OPT+** button. Select ***Select All*** or ***Release All*** and press the **OK** button.

Note: When deleting or moving a locked file, you will be prompted to enter your password. Enter the password using the **NUMERIC(0-9)** buttons.

Tip:	The default password is **0000**.

4. Photo Viewer

1. Select the image file you want and press the **OK** button to enlarge the image.
2. Press the **EXIT** button to close the viewer. Press the **PLAY** button to go back.
3. Go to previous file or next file using the ◄/► buttons.

5. Slide Show

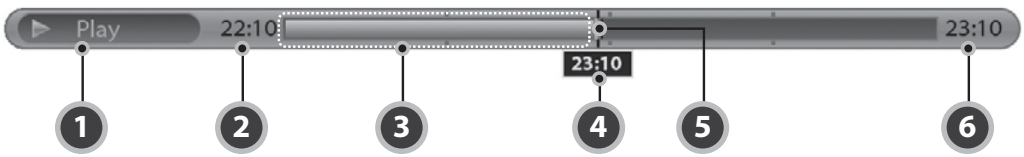
1. Select ***View slide show*** and press the **OK** button in Play option to start slide show. The files will appear in full screen for five seconds each.
2. Press the ◄/►, **i** or **OK** button to stop the slide show.
3. Press the **LAST** or **EXIT** button to return to the photo file list.

12. Personal Video Recorder (PVR)

The product automatically saves the programme to the built-in hard disk drive temporarily; this enables you to pause, play, fast rewind or fast forward the current broadcast.

12.1 Play bar

Press the **PLAY** button while watching a recording to display the play bar. Play bar displays the current operation status, the time gap between the broadcasting point and watching point and the amount of temporarily saved programme.



1. Play status
2. Start time
3. Amount of saved programme
4. Present time
5. Play pointer
6. Total time (present time in TSR)

To move to the specified time point directly, enter the time you want using the **NUMERIC(0-9)** buttons. To move the watching point bar to the time point you want, press the ◄/► button while playing back and then press the **OK** button to play the programme from the specified time point. If you do not press the **OK** button after moving the watching point, it will move automatically.

Press the **STOP** button to stop the current file and go to live TV.

12.2 Time Shifted Recording (TSR) and Playback

You can perform Time Shifted Recording (TSR) and other VCR functions within TSR using the playback control buttons while playing a programme.

1. Playback

You can view the recorded files in the ***Media List***→***Video***. Press the **MEDIA** button to access the recorded file list easily.

1. Press the **PREVIOUS** button to start playback from the previous chapter.
2. Press the **NEXT** button to start playback from the next chapter.
3. Press the ◄ button to jump back and play from that point. Press the **STOP** button to return to live video.
4. Press the ► button to jump ahead and play from that point. Press the **STOP** button to return to live point.

Note:

- Enter the **NUMERIC(0-9)** buttons during playback and press the **OK** button to move to that specific time point.
- For more information about playback, refer to ***11.1.1 Play Option***

2. TSR

You can perform fast rewind, fast forward, slow motion and pause while playing back a recorded file from the media list.

Fast Forward

1. Press the **FAST FORWARD** button to fast forward the programme.
2. Each time you press the **FAST FORWARD** button, the speed increases in the following sequence: x2, x4, x16, x32, x64.
3. If you press the **PLAY** button, the fast forward operation stops and the programme is played at normal speed.

Note: You can use the fast forward operation only when there is a time gap between the current watching point and the broadcasting (live) point caused by previous operations such as pause, slow motion or fast rewind. You can fast forward to the current broadcasting point. If the watching point reaches the broadcasting (live) point, the programme is automatically played at normal speed.

12. Personal Video Recorder (PVR)

Fast Rewind

1. Press the **FAST REWIND** button to watch missed scenes.
2. Each time you press the **FAST REWIND** button, the rewind speed increases in the following sequence: x2, x4, x16, x32, x64.
3. If you press the **PLAY** button, the fast rewind operation stops and the programme is played at normal speed.

Note: You can fast rewind back to the start point. If you reach the start point while rewinding, the programme is automatically played at normal speed from that point.

Slow Motion

1. Press the **SLOW** button to playback the file in slow video.
2. If you press the **PLAY** button, the slow video operation stops and the programme is played at normal speed.

Pause

1. Press the **PAUSE** button to pause the current programme.
2. If you press the **PAUSE** button once again, the programme is resumed from that point.

Note: Pause makes the time gap or delay between the broadcasting (live) point and watching point. The time gap is equivalent to the period the programme has been paused. Operations such as slow motion and fast rewind also make the time gap. Press the **STOP** button to close the time gap and go to live programme.

12.3 Recording

Using the built-in hard disk drive, you can record a programme without external media devices such as a VCR.

Note:

- Ensure that there is enough free space before recording. If the free space on the hard disk drive is insufficient, recording will stop. Recording a one-hour programme may require up to two or three GB of hard disk space. The space necessary for recording a one-hour programme may be different depending on the programme.
- You can record radio programmes also.
- Pressing the **STANDBY** button while recording will not stop the recording. The product will go to standby mode after completing recording.
- Press the **i** button to display the recording list and i-plate.

1. General Recording

1. Press the **RECORD** button to record the current programme instantly.

2. Press the **RECORD** button again while recording to adjust the recording end time. You can adjust the recording end time by -/+10 minutes using the ◄/► button.

12. Personal Video Recorder (PVR)

2. Multi-Channel Recording

1. To record another channel, change channels while recording and press the **RECORD** button again.
2. You can record up to four channels simultaneously.
3. If you press the **RECORD** button while recording four other channels, you will be prompted to select a recording you want to stop and replace with a new recording.

3.Recording Duration

1. Press the **RECORD** button while recording to set the recording duration time.
2. The default recording duration time is two hours from the recording start time.
3. Press the ◀/▶ button to add or reduce the recording time in 10 minute units. The **RECORD** button functions as the ▶ button.

4. Stop Recording

1. Press the **STOP** button to stop recording one of the four other channels.
2. You will be prompted to select one among the current recordings. Select the channel you want to stop recording using the ▲/▼ button.
3. Select ***OK*** and press the **OK** button.

12.4 Bookmark

1. Adding Bookmark

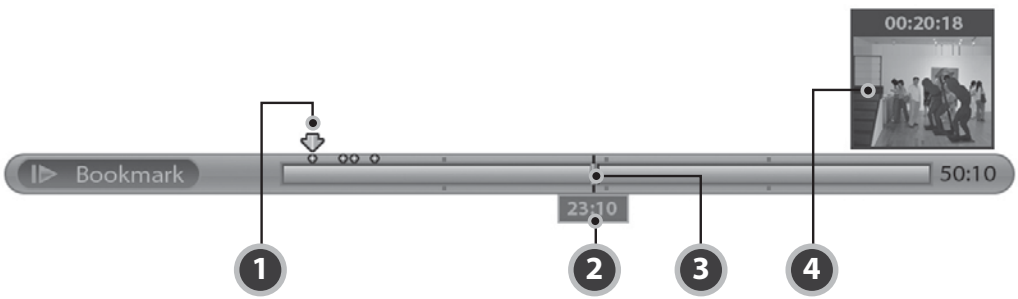
You can jump to a position directly using the bookmark feature in recorded file playback. Use bookmarks to search a specific scene quickly and conveniently.

Press the **ADD BOOKMARK** button at the location you want to set a bookmark while playing back a recorded file. The bookmark icon is displayed at the lower right of the screen.

Note: The bookmark function is available for recorded files only.

2. Bookmark List

1. Press the **BOOKMARK LIST** button after adding a bookmark.
2. Select the location you wish to view using the ◄/► button. The bookmark image is displayed at the lower right of the screen.
3. Press the **BOOKMARK LIST** button again to return to the play bar.
4. To delete a location, select the location you want to delete and press the **ADD BOOKMARK** button.



1. Bookmark cursor
2. Watching point time
4. Watching point
5. Bookmark icon

13. Software Update

In order to maintain proper performance of the product, it is essential to have the most up-to-date software. Visit the Humax website to check the latest news and newly released software versions. http://www.humaxdigital.com.
It is recommended that you periodically check for the availability of software update.

13.1 OTA (Over the Air)

OTA, an abbreviation of ***Over-the-Air***, is a standard for the transmission of software through a broadcast system. OTA is simply an alternative method for downloading software versions. However, the manufacturers reserve the right for deciding the release of the software for their products by beaming the latest software versions over the air via satellite. Note that OTA is only limited to certain geographical regions mainly due to different antennas having different footprints (area where the signal can be received). The software update via satellite will only occur under the following circumstances.

1. The equipment should have the appropriate loader software.

Caution:
- Please note that if the normal loader software is not equipped, the product may not be updated or operate properly after software update.

2. The manufacturer decides to release the software via a designated satellite.
3. The equipment must be tuned properly to the same antenna equivalent to that of the manufacturer.
4. Update software when the signal strength and quality is high. If the weather is not favorable, and the signal strength and quality are not recommendable, perform the software update later.

Caution:
- Please be careful to keep the power on and the power cord plugged in during software update. If the power is off during software update, fatal damage may be caused to the product.
- Please be careful not to pull out the signal line (LNB cable) during software update. Update may be interrupted and the product may not operate.

Note:
- It may take 5~10 minutes to update software.
- Other functions will not activate while software update takes place.
- You cannot schedule programmes during software update.

1. Software update while watching a programme

When new software is detected, you can choose to download the software immediately or save for later. In case there is no software currently available, select ***Next*** and press the **OK** button to proceed to the next step.

13. Software Update

2. Software update via USB host

Copy the software to the USB memory stick and connect the USB to the receiver. Press the **STANDBY** button and turn off the power. To power on, press the **STANDBY** button while switching on the receiver to start software update.

Note: Visit the HUMAX website for details.

14. Appendix

14.1 Menu Map

 Preferences	1. Parental Control 2. Language Setting 3. Time Setting 4. Media Setting 5. A/V Setting 6. Other Settings
 Edit Channels	1. Edit Channel List 2. Edit Favourite List
 Installation	1. Antenna Setting 2. Search Channels 3. Software Update 4. Default Setting
 System	1. Status 2. Signal Detection 3. Common Interface

14.2 Trouble Shooting

Before contacting your local service centre, please read the tips below carefully. If the problem persists after completing the following procedure, please contact your local product distributor or service centre for further instructions.

1. **No message displayed on the front panel. (The product will not switch on.)**
   - Check the main power cable and make sure it is plugged into a suitable power outlet.
   - Check that the mains supply is switched on.
   - Check that the power switch is on at the rear of the product. (where applicable)
   - Connect the power cable to a different power outlet.

2. **No picture on TV set**
   - Make sure that the product is powered on and in operation mode. (Press the STANDBY button)
   - Make sure that the AV cable is firmly connected to the TV.
   - Make sure that the antenna cable is properly connected to the product.
   - Make sure that the antenna setting in the menu is correct.
   - Check the brightness level of the TV.
   - Check if the channel is currently on air. Contact the broadcaster to ensure that the channel is running.
   - Press the SOURCE button if the product is in external input mode.

3. **Poor picture/sound quality**
   - Install the antenna in an obstacle-free place.
   - Make sure there is no mobile phone or microwave oven near the product.
   - Keep the power and the antenna cable for the satellite apart from each other.
   - Check the signal levels and adjust your antenna if the level is too low. The signal level may be affected by weather conditions.

Note: If the antenna is covered with snow or the RF is weakened by heavy rain, the condition of the sound and picture may temporarily be poor. However, the poor sound and picture quality due to weather conditions cannot be accepted as a malfunction of product.

   - Check that your dish alignment is correct.
   - Change the satellite dish for a larger one as this will increase the signal levels received.
   - Replace the LNB with a lower noise factor in cases where the noise factor is too high.
   - Replace the LNB with a new one in case it is damaged or out of order.

4. **No or poor sound**
   - Check that your AV cable is connected correctly.
   - Check the volume levels of your TV set and the product.
   - Check if the product or TV is on mute.
   - Check audio type or soundtrack option in the AV menu.

5. **Remote control does not operate.**
   - To control the product, the top end of the remote control should point directly towards the receiving part of the product.
   - Remove and reinsert the batteries in the remote control.
   - Replace the batteries in the remote control for a new set.

14. Appendix

6. Cannot make reservations.
- Check that no previous reservations are conflicting with the new reservation.
- Check that the product is switched on when starting recording

7. No password information is given.
- The default password is always 0000.

8. Channel search does not work.
- Make sure that the antenna setting in the menu is correct.

9. Cannot update new software.
- You can get an update. If the product does not show a message requesting update, that means no software is available.

10. Cannot watch scrambled channels.
- Check that you have the appropriate Smartcard or CI-Module. Reinsert the Smartcard or CI-Module and make sure it initializes correctly.
- Check in the menu that the product is detecting the Smartcard or CI-Module.
- Check in the menu that you have a valid and working subscription to the channels you wish to view.
- Ensure that the Smartcard or CI-Module is not damaged.

11. Cannot watch pay channels.
- Check in the menu that you have a valid and working subscription to the channels you wish to view.
- Contact your network operator for more information.

12. Cannot record progammes.
- The hard disk is full. Delete unnecessary programmes and make space for new recording.
- Check if recording is overlapped with another channel. Stop the current recording or wait until the recording is finished.

13. Cannot operate the TSR (Time Shifted Recording).
- The TSR may not be available during the recording. Wait until the recording is finished.
- Delete unnecessary programmes and make space for new recording.

14. The product makes a humming noise.
- The noise is from the fan; the hard disk is operating normally. This kind of noise is inevitable but seldomly noticeable.

15. Cannot playback.
- To play back the recorded file of a scrambled channel, use the Smartcard. In case it has been a long time since you last recorded, this may not work. Contact the product distributor.
- The signal during the recording may be weak or the hard disk too full.

16. Cannot change channel while recording.
- Certain channels may not be changed due to restriction of the tuner or connection type.

14.3 Error Message

Error message	Possible causes	What to do
No or bad signal	The satellite dish is not pointing at the satellite.	Adjust dish alignment.
	Signal is too weak.	Increase the LNB voltage or connect a signal amplifier.
	Satellite dish is too small.	Change to a larger dish.
	Problem with LNB.	Change the LNB.
	Wrong antenna setting.	Set the antenna correctly.
The channel is scrambled or not available.	The channel has a signal, but no audio or video is provided.	Confirm if the channel is currently on air.
	The channel has not been deleted by broadcasting company.	Remove the channel from the channel list and check for new transponder details.
	The channel is for data broadcasting.	The channel cannot be viewed with the appropriate model that supports data channels.
	Smartcard is not plugged in.	Insert Smartcard.
	Wrong Smartcard is in use.	Insert the appropriate Smartcard for the channel(s) you wish to view.
	Smartcard is not plugged in correctly.	Reinsert Smartcard; ensure that it is inserted correctly.
	Smartcard is damaged.	Contact your Smartcard retailer or channel broadcaster for a Smartcard replacement.
Audio not available.	The channel has a video signal, but no audio is provided.	Press the audio button on your remote control to confirm that the channel has audio options.
CI module not installed	CI module is not installed.	Insert CI module
	CI module is not inserted correctly.	Reinsert CI module.
	CI module is not recognized.	Insert a different CI module to check if your existing module is working.

14. Appendix

Error message	Possible causes	What to do
Invalid CI module	Wrong CI module.	Insert the correct CI module.
	CI module is not inserted correctly.	Remove and reinsert the CI module.
	CI module is damaged.	Replace CI module.
Short LNB	LNB cable is short.	Replace LNB Cable.
	LNB is internally short.	Replace LNB.
	Alien substance is inserted in LNB IN Port and port may be damaged.	Remove the alien substance and contact local Service center in case damaged has occurred.

14.4. Specification

Tuner & Channel	
No of Tuners	2
Input Connector	F-Type, IEC 169-24, Female
Frequency Range	950MHz to 2150MHz
Signal Level	-25 to -75dBm
LNB Power & Polarisation	Vertical : +13.5V (+14.5V at high voltage) Horizontal : +18V (+18.5V at high voltage) Current : Max. 500mA (Overload protection)
22KHz Tone	Frequency : 22 ± 4KHz Amplitude : 0.7 ± 0.2V
DiSEqC Control	Version1.0, 1.2, USALS, SCD (Single Cable Distribution)
Demodulation	QPSK, 8PSK
Input Symbol Rate	DVB-S : 2-45Ms/s DVB-S2 : 10-30Ms/s (QPSK), 10-31Ms/s (8PSK)
FEC Mode	DVB-S: Auto,1/2,2/3,3/4,5/6,7/8 DVB-S2: Auto,1/2,3/5,2/3,4/5,5/6,8/9,9/10 (QPSK) Auto,3/5,2/3,3/4,5/6,8/9,9/10 (8PSK)
MPEG Transport Stream A/V Decoding	
Transport Stream	MPEG-2 ISO/IEC 13818 Transport Stream Specification
Profile Level	MPEG-2MP@ML, MPEG-2MP@HL, MPEG-4 AVC/H 264 HP@L4
Input Rate	15MB/s Max
Video Format	4:3, 16:9
Video Resolution	1080i, 720p, 576p, 576i
Audio Decoding	MPEG/MusiCam Layer I & II
Audio Mode	Single channel/Dual channel/Joint stereo/Stereo

14. Appendix

Memory	
Flash Memory	16MB
RAM	256MB
EEPROM	8KB
HDD	160/320GB
Audio/Video/Data In/Out	
Video	TV-SCART(FBAS,S-Video,RGB) VCR-SCART(FBAS, S-Video) RCA-Typ(FBAS), YPbPr(RCA), HDCI/HDCP
Audio	TV-SCART, VCR-SCART, Audio L?R, S/PDIF(Digital Audio Output)
File Format	JPEG(jpeg, .jpg, .jpe, .jfif), MP3(mp3, .mp2, .mp1)
Data Port	
USB	USB 2.0 Host (5 Volt ⎓500mA Max.)
Power Supply	
Input Voltage	90-250V a.c., 50/60Hz
Type	SMPS
Power Consumption	Max. 57W
Protection	Separate internal fuse. The input should be protected against lightning.
Physical Specification	
Size	380mm × 70mm × 281mm
Weight (Net)	3.5kg
Operating Temperature	0 ºC to +45 ºC
Storage Temperature	-10 ºC to +70 ºC

14.5 Glossary

1. **DiSEqC (Digital Satellite Equipment Control)**
   A DiSEqC compatible receiver relies on a switching box which detects the 22kHz tone pulsing rapidly on and off. In this way, a specially designed receiver can control numerous LNBs through a DiSEqC switching box.

2. **Dolby Digital**
   An encoding system that digitally compresses up to 5.1 discrete channels of audio (left front, centre, right front, left surround, right surround) into a single Bitstream. A low frequency effect (LFE) channel is included providing the sound needed for special effects.

3. **DVB (Digital Video Broadcasting)**
   Set of standards that define digital broadcasts using satellite, cable or terrestrial systems.

4. **EPG (Electronic Programme Guide)**
   An electronic equivalent to a printed television listings magazine; it is an application used with digital set-top boxes and digital television sets to list current and scheduled programs that are or will be available on each channel, including a short summary or commentary for each program. The information supplied in the EPG is sent and updated by the channel broadcaster.

5. **FEC (Forward Error Correction)**
   A technique for error control of data transmission.

6. **Frequency**
   The property of a signal measured in cycles per second (=Hz).

7. **FTA (Free- To-Air)**
   An unscrambled broadcaster allowing customers to view channels or services without paying any subscription.

8. **Hi-Fi (High Fidelity)**
   The characteristics of audio devices that can play back all the audio frequencies a person can detect, which is the range of 16Hz~20KHz. Sometimes it is used to indicate good quality of audio devices such as stereo tape recorders.

9. **LNB (Low Noise Block)**
   A device that is mounted on an arm facing your satellite dish, focusing on satellite signals. A LNB converts signals received from satellite to a lower frequency and sends them to a satellite receiver via coaxial cable.

10. **OSD (On Screen Display)**
    OSD displays the basic information necessary for the users to configure monitor or TV settings. OSD information may include brightness, contrast, tuning, RGB adjustment, and screen size and position.

11. **OTA (Over the Air)**
    A standard for the transmission of software for equipment, through a broadcast system. Manufacturers reserve the right for deciding the release of the software for their products.

12. **Polarization**
    The direction of the electrical and magnetic fields of a signal. Satellites use both vertical and horizontal polarisation. Means that a frequency can be used twice.

13. **PID (Packet Identifier)**
    A set of numbers identifying stream packets contained within a single data stream.

14. Appendix

14. QPSK (Quaternary Phase Shift Keying)
Digital modulation technique in which the carrier phase can have one of four possible values.

15. RF (Radio Frequency)
Television signals are modulated onto RF signals and are then demodulated by your television's or STB's tuner.

16. RF Modulator
Enables you to output the receiver's digital signals to a TVs RF (Aerial) input, allowing you to connect the receiver to a TV set without a SCART connection.

17. RS-232C
A connection to allow you to connect to a PC to update receiver's software.

18. SCART
A 21-pin connector standard to connect two pieces of Audio-Visual equipment such as a TV and a VCR. Each device will have a 21-pin female connection; a cable with male connection at both ends is used for connecting the devices.

19. Smartcard
A credit card sized card that contains updateable chip memory. It is used for accessing Pay TV (encrypted) channel or services when inserted into an appropriate receiver.

20. S/PDIF (Sony/Philips Digital Interface format)
A standard format for the transfer of digital audio signals. It allows the transfer of digital audio between two devices without any conversion to and from analogue, which could degrade the signal quality.

21. S-Video (Super-Video)
Sometimes referred to as Y/C video; a technology for transmitting video signals via a cable. It is a video signal transmission in which the luminance (brightness) and the chrominance (colour) signals are transmitted separately to achieve superior picture clarity.

22. Transponder
A satellite is divided up in parts called transponders. A transponder is one distribution section of the satellite. Each transponder can be used for distribution of several channels or services.

23. PIP (Picture In Picture)
A function that allows you to display two different TV channels (or TV inputs) on a single screen.

24. PVR (Personal Video Recorder)
Video recorder that can record and playback programmes directly using the embedded hard disk drive(s).

25. Trick-Play
Pause, Fast Forward/Fast Rewind, Slow Motion, Instant Replay, Commercial Skip, Repeat A-B.

26. TSR (Time Shifted Recording)
A function that records the present programme temporarily to support trick-play.

27. HDD (Hard Disk Drive)
The primary computer storage medium, which is made of one or more aluminum or glass platters, coated with a ferromagnetic material.

14.6 Service and Support

Information concerning troubleshooting, software upgrade and product support is provided in the following websites and call centers. Should your product require warranty service, please contact HUMAX to obtain the appropriate authorization.

Deutschland	
Tel:	01805-778870 (€ 0,14/Min)
Öffnungszeiten:	Mo-Fr 8:00-23:00 Uhr, Sa-So 8:00-20:00 Uhr
E-mail:	support@humax-digital.de
Website:	www.humax-digital.de
Sprache:	Deutsch/Englisch/Türkisch

UK	
Tel:	0870 247 8800
Opening Hours:	Mon-Fri 8:30-21:00
E-mail:	uksupport@humax-digital.co.uk
Website:	www.humax-digital.co.uk
Language:	English

Australia	
Tel:	1800 613 011
Opening Hours:	Mon- Fri 9:00-17:30
E-mail:	techinfoau@humaxdigital.com
Website:	www.humaxdigital.com/australia
Language:	English

Italia	
Tel:	899 100 080 (€1+ VAT/min)
Orario:	Lun.-Ven. 8:00-18:00
Lingua:	Italiano

Sverige	
Tfn:	+4655085527
Öppettider:	Mån-fre 08:00-16:30
Språk:	Svenska/engelska

14. Appendix

Suomi	
Puh:	+358 9 56186 130
Aukioloajat:	ma-pe 8:00-16:00
Kieli:	Suomi/Englanti

Austria	
Tel:	0820 400675 (€0,14/min)
Opening Hours:	Mon-Sun 8:00-23:00
E-mail:	support@humax-digital.de
Website:	www.humax-digital.de
Language:	Deutsch/English/Turkish

Note: For hardware repair, please visit our website.

14.7 Remote Control Code List

1. Using the Universal Remote Control

1. Press the **MODE** button. The LED will blink once.
2. Press the **MODE** button for 3 seconds until the TV LED turns on. The LED will stay on even after the button is released.
3. Select the product you want to set pressing the MODE button. Every time you press the button, the LED will display in the following order; STB/PVR, TV, AUDIO, DVD, STB/PVR…
4. Enter the 3-digit code. Every time you enter a number the LED will blink. When the third number is entered, the LED will blink twice. The power key code of the selected model will be output.
5. After the power key code is output, the LED returns to input mode.
6. Press **OK** and the LED will blink three times. The setup is complete.

Note: When no code is entered for one minute the Universal setting mode will switch to normal mode.

2. TV Code List

Brand	Code
A MARK	002
ABEX	016
ACCENT	004
ACTION	110, 124
ACURA	004
ADMIRAL	030, 042, 076, 099, 123, 159, 160
ADVENTURA	177
ADYSON	016, 063
AIKO	029
AKAI	015, 099, 109, 124, 161, 172, 177
AKURA	064, 071, 161
ALARON	051, 062
ALBA	004, 017, 018, 064, 123, 117
ALBIRAL	157, 158
ALLORGAN	118
ALLSTAR	161
AMBASSADOR	049
AMPLIVISION	063
AMSTRAD	004, 018, 047, 049, 145
AMWAY	161
ANAM	003, 004, 052
ANAM NATIONAL	024

Brand	Code
ANITECH	004, 071, 161
ANSONIC	127
AOC	002, 009, 015, 056
ARC EN CIEL	171
ARCAM	062, 063
ARCHER	002
ASA	159, 160, 161
ASBERG	158
ASUKA	064, 071
ATLANTIC	098
AUDINAC	081
AUDIOSONIC	018, 071
AUDIOVOX	002, 029, 052, 084
BANG & OLUFSEN	160
AUMARK	026
AUTOVOX	068, 076, 097, 160
BARCO	086
BASIC LINE	004, 064
BAUR	018, 087, 097, 099, 102, 108, 175, 176, 177, 178, 181, 185
BAYSONIC	052
BEAUMARK	050

14. Appendix

BEC	099, 110, 124
BECRESE	040, 099, 108, 109, 110, 172, 177
BEKO	161, 162, 163, 164, 165
BELCOR	009
BELL & HOWELL	006, 038, 106
BEON	018
BINATONE	063
BLACK PANTHER	158
BLACKSTRIPE	040, 106, 108, 172
BLAUPUNKT	059, 060, 061
BLUE SKY	064
BLUE STAR	075
BOOTS	063
BOSCH-BAUER	098
BPL	075
BRANDT ELECTRONIQUE	171
BRADFORD	052
BRINKMANN	123
BRITANNIA	062
BRIONVEGA	159
BRIORRYEGA	160
BROCKWOOD	009, 172, 177
BROKSONIC	002, 067, 085, 172, 177
BROTHER	071
BRUNS	126, 158, 159, 160
BSR	093, 118
BTC	064
BUSH	004, 017, 018, 064, 075, 093, 099, 117, 172
CAMPLE	172, 177
CANDLE	015, 025, 057
CAPEHART	124, 172
CAPSONIC	071
CARNIVALE	015
CARREFOUR	017
CARVER	023, 046
CASCADE	004
CATHAY	018
CCE	063, 018, 078
CCI	115
CENTURION	018
CENTURY	159, 160
CGE	101, 123

CIE	133, 161
CIMLINE	004, 117
CINERAL	029, 084, 172
CIRCUIT CITY	177
CITIZEN	015, 019, 025, 026, 029, 040, 057, 074
CLAIRTONE	056
CLARIVOX	018, 125, 168
CLATRONIC	098, 127, 158, 161
CME	004, 005, 017, 018, 028, 042, 049, 063, 065, 066, 068, 076, 079, 087
CONCERTO	025
CONDOR	098, 158, 161
CONIC	110, 172
CONTEC	004, 017, 052, 056, 062, 172
CONTINETAL EDISON	141, 171
COSMOS	161
CRAIG	052
CRIPTOVISION	105
CROSLEY	023, 110, 159, 160, 172, 177
CROWN	004, 018, 019, 052, 127, 158, 161
CS ELECTRONICS	062
CTC	098, 158
CURTIS MATHES	006, 015, 019, 020, 021, 023, 026, 030, 035, 038, 025, 040, 044, 084, 106, 172
CXC	052
CYBERTRON	064
DAEWOO	004, 009, 018, 019, 029, 084, 133, 161
DAINICHI	064
DANSAI	018
DAYTON	004, 009, 019, 108
DE GRAAF	066, 097, 161
DECCA	018, 028, 129, 161
DECCAVIDEO	161
DENON	035
DESMET	098
DIXI	003, 004, 018, 126
DUAL	097
DUAL TEC	063
DUMINT	127
DUMONT	007, 009, 158, 159, 160, 172, 177
DYNATECH	063, 172, 177

14. Appendix

EB TELECOM	105
ECR	172
ECTEC	081
ELBE	116, 168
ELBIT	160, 161
ELECTROBAND	056, 177
ELECTROHOME	080, 106, 110, 172, 177
ELECTROVENDA	161
ELEKTA	071
ELEKTRONIKA	161
ELIN	018, 161
ELITE	040, 064, 098, 106, 172
ELMAN	127, 158, 163
ELTA	004
EMERSON	009, 019, 038, 049, 050, 051, 053, 054, 056, 067, 072 ,074, 075, 085, 158, 159, 161, 172, 177
EON	172
ENVISION	015
ERRES	018
ESC	161
EURO-FEEL	071
EUROMANN	071
EUROPHON	127, 158
FERGUSON	018, 163, 166, 167, 168, 169
FIDELITY	062, 097, 104
FINLADIA	106
FINLUX	018, 028, 051, 093, 129, 158, 160, 161
FIRST LINE	118, 004, 062, 063
FISHER	038, 041, 063, 097, 106, 108, 126, 160, 172
FORMENTI	018, 098, 103, 160, 161
FORTRESS	160, 172
FRABA	161
FRONTECH	042, 071, 099
FUJITSU	028, 051, 124, 172, 177
FUNAI	047, 051, 052, 071, 118, 172, 177
FUTURETECH	052
GALAXIS	123, 142, 158, 161
GALAXY	158
GBC	099
GE	011, 013, 020, 021, 024, 030, 034, 050, 075, 084
GEC	018, 028, 063, 095, 110, 129, 161
GELOSO	004, 099
GENEXXA	042, 064
GIBRALTER	007, 009, 015
GO VIDEO	026
GOLDSTAR	156, 001, 009, 015, 016, 018, 019, 025, 033, 050, 063, 071, 093, 110, 124, 140, 161
GOODMANS	017, 018, 028, 051, 063, 133, 161
GPM	064
GRADIENTE	022, 025, 046, 082
GRADIN	098
GRAETZ	042, 099
GRANADA	018, 028, 063, 097, 109, 124, 161
GRANDIN	075
GRUNDIG	018, 059, 060, 068, 137
GRUNPY	051, 052
HALIEAX	071
HALLMARK	050, 172, 177
HANSEATIC	018, 089, 097, 098, 099, 118, 119
HARLEY DAVIDSON	051, 172, 177
HARMAN KARDON	023
HARRAD	172, 177
HARVARD	052, 172, 177
HCM	004, 071, 075, 161
HEATHKIT	177
HEMMERMANN	097
HIFIVOX	171
HINARI	004, 017, 018, 051, 064, 161, 172
HISAWA	075, 159
HITACHI	016, 017, 025, 031, 032, 035, 037, 042, 048, 063, 094, 095, 096, 097, 099, 102, 108, 109, 110, 111, 112, 113, 114, 124, 148, 172, 177
HUANYU	062
HUMAX	151, 152, 153
HUSPI ELEKTRONIK	123
HYPERVISION	134
HYPSON	018, 071, 075
ICE	063, 071, 161
ICES	064
IMA	172, 177
IMPERIAL	092, 099, 101, 123, 161
INDESIT	068

14. Appendix

INDIANA	018
INFINITY	023
INGEKEN	139
INGELEN	042, 164
INNOHIT	028, 124
INNOVA	018
INTEQ	007
ISKRA	158
INTERBUY	071
INTERFUNK	018, 042, 095, 097, 099, 159, 160, 161
INTERVISION	018, 063, 071, 127, 144, 158, 161
ISUKAI	064
ITT	042, 099, 108
JACSON	129
JBL	023
JCB	137, 177
JVC	017, 022, 045, 054, 172
JEC	040
KAISUI	004, 062, 063, 064, 075
KAMP	062
KAPSCH	042, 095, 099
KARCHER	161
KATHREIN	089
KAWASHO	062, 077
KEC	052
KENDO	018, 099, 117, 119, 127, 158, 161
KENWOOD	009, 015
KINGSLEY	062
KLH	124, 172, 177
KLOSS	012
KNEISSEL	161
KMC	033
KOLSTER	158
KONIG	004, 005, 017, 018, 042, 061, 068
KORPEL	018
KORTING	098, 160
KOYODA	004
KTV	015, 019, 052, 056, 063, 074, 172, 177
KUBA ELECTRONIC	097
KURA	097

LENCO	071, 133, 146, 018, 028, 071, 118, 124, 158, 161
LG	025, 154, 161
LIESENK & TTER	018 ,161
LIFETEC	071, 161
LINITRON	172
LLOYD	177
LLOYTRON	016, 172
LOEWE	159, 160
LOGIK	156, 006
LUMA	099
LUXMAN	025
LUXOR	068, 094, 097, 099, 102, 124
LXI	007, 020, 023, 038, 040, 050, 106
M ELECTRONIC	004, 018, 042, 063, 097, 127, 163, 172
MAGNADYNE	158, 159, 160
MACYS	172
MAGNAFON	127, 158, 167
MAGNASONIC	106, 161
MAGNAVOX	010, 012, 014, 015, 017, 023, 051, 057, 058, 110, 172
MAJESTIC	006
MANDOR	071
MANESTH	063, 071, 098, 117
MARANTZ	015, 018, 023, 089, 161
MARCY´S	172
MARELLI	160
MARK	018
MATSUI	004, 005, 018, 049, 063, 092, 097, 117, 161
MATSUSHITA	021, 070
MC MICHAEL	110
MEDIATOR	018
MEGATRON	002, 035, 050, 109
MEI	056
MEMOREX	004, 006, 025, 026, 033, 036, 038, 050, 070, 071, 106
MEMPHIS	124
METZ	159, 160, 161
MGA	009, 015, 036, 039, 050
MIDLAND	007, 016, 019, 020, 021, 034
MINERVA	068
MINUTZ	011

14. Appendix

MITSUBISHI	009, 017, 030, 036, 039, 050, 068, 159, 160, 172
MIVAR	062
MOTOROLA	024, 030
MTC	009, 015, 025, 026, 056, 062, 097
MULTISTANDARD	127
MULTITECH	004, 052, 062, 063, 099, 127, 158, 172, 177
MUTIMEDIA	132
NAD	040, 044, 050, 172
NAONIS	099
NATIONAL	068
NEC	009, 015, 017, 025, 046, 172
NECKERMANN	018, 059, 087, 089, 097, 099, 102, 159, 160, 161, 177, 185, 189
NEI	018, 161
NESCO	051
NETSAT	018
NIKKAI	016, 018, 028, 040, 062, 064, 071, 124
NIKKO	007, 015, 020, 029, 038, 040, 050, 161
NISATO	081
NOBLEX	083
NOBLIKO	158
NOGAMATIC	171
NOKIA	071, 094, 095, 096, 097, 099, 106, 108, 143, 161
NORDMENDE	160, 163, 171
NORMN	161
NOSHI	008
NTC	029
OCEANIC	042, 099, 106, 118
OKANO	161
ONWA	052
OPTIMUS	038, 044, 070
OPTONICA	030, 043
ORAVA	161
ORION	018, 049, 051, 067, 085, 097, 098, 118, 117, 161, 172, 177
OSAKI	016, 028, 063, 064, 071, 124,
OSO	064
OSUME	016, 028, 124
OTTO VERSAND	017, 018, 059, 063, 087, 089, 093, 097, 098, 099, 102, 108, 117, 118, 161, 163, 172, 175, 176, 177, 178, 181, 182, 185, 186, 189
PALLADIUM	099, 160
PANAMA	063, 071
PANASONIC	156, 020, 021, 022, 023, 024, 026, 030, 035, 036, 038, 040, 042, 043, 050, 065, 068, 070, 079, 099
PATHE CINEMA	062, 098
PATHE MARCONI	171
PAUSA	004
PCE/PEC	040, 106, 108, 172
PENNEY	001, 102, 008, 009, 011, 013, 015, 016, 019, 020, 021, 025, 026, 034, 040, 050
PERFORMANCE	172, 177
PHASE	016
PHILCO	009, 010, 012, 014, 015, 023, 035, 057, 058, 085, 123, 159, 160, 161, 172
PHILIPS	007, 008, 009, 010, 011, 012, 013, 014, 018, 019, 023, 089, 110, 124, 138, 160, 161, 172, 177
PHOENIX	160
PHONOLA	018, 098, 160
PILOT	009, 015, 019
PIONEER	042, 044
POLICOM	068, 158
POLYRON	071
PORTLAND	009, 019, 029, 177
PRANONI PRINCE	099, 158
PRIMA	040, 106, 172
PRINZ	124
PRISM	021
PRO VISION	161
PROFEX	004, 161
PROFITRONIC	158, 161
PROLINE	119
PROSCAN	015, 020
PROTEC	099, 127
PROTECH	004, 018, 063, 071
PROTON	002, 050
PULSAR	007, 009, 110, 124
QUASAR	021, 024, 043, 070, 158
QUELLE	005, 018, 087, 093, 097, 099, 108, 117, 118, 172, 175, 176, 177, 178, 181, 185, 186, 189, 192, 193
QUESTA	017, 172
RADIO SHACK	009, 015, 016, 019, 020, 025, 038, 043, 050, 052, 106
RADIOLA	018, 161

14. Appendix

RADIOMARELLI	160
RADIOTONE	071, 161
RADIX	108
RANK ARENA	017
RCA	008, 009, 020, 021, 030, 034
REALISTIC	009, 015, 016, 019, 025, 038, 043, 050, 052, 106
REKORD	149
REVOX	018
REX	042, 071, 076, 099
RFT	088, 126, 160
RHAPSODY	056, 062
R-LINE	018
RM-U301	174
ROADSTAR	004, 064, 071, 161
ROYAL LUX	131
RTF	018
RUNCO	007, 015
SABA	042, 095, 099, 163, 170, 171
SAGEM	139
SAISHO	004, 005, 049, 071, 117
SAKIO	071
SALORA	042, 094, 097, 099, 102, 106, 124
SAMBERS	127, 158
SAMPO	015, 016, 019
SAMSUNG	004, 009, 015, 016, 018, 019, 025, 026, 050, 063, 071, 078, 089, 124, 137, 161
SAMSUX	019
SANDRA	062
SANSEI	084
SANSUI	085
SANYO	005, 017, 028, 038, 041, 106, 107, 108, 124, 129, 172
SBR	018
SCHAUB LORENZ	099
SCHNEIDER	018, 064, 071 ,097, 136, 143, 147, 161
SCIMITSU	009
SCOTCH	050
SCOTT	009, 050, 051, 052, 067, 172, 177
SEARS	020, 023, 025, 038, 040, 041, 047, 050, 051, 106
SEG	017, 063, 071, 126, 127, 158, 161, 172, 193
SEI	049
SEI-SINUDYNE	097, 099, 117, 118, 127, 158, 159, 160, 161, 177, 181
SELECO	042, 076, 099, 100, 119, 120, 122
SEMIVOX	052
SEMP	040
SENTRA	040
SHARP	017, 019, 030, 043, 172
SHINTOM	161, 177
SHINTOSHI	161
SHIVAKI	161
SHOGUN	009
SHORAI	118
SIAREM	127, 158, 159, 160
SICATEL	121
SIEMENS	018, 059, 060, 061, 161
SIGNATURE	006, 040, 177
SILVER	017, 172
SIMPSON	057, 058
SINGER	127, 159, 160, 161
SINUDYNE	049
SKANTIC	099
SKY	018
SOGERA	098
SOLAVOX	016, 042
SONITRON	108
SONOKO	004, 018, 071
SONOLOR	042
SONTEC	018, 161
SONY	005, 017, 039, 087, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194
SOUND&VISION	127
SOUNDESIGN	050, 051, 052, 057, 172, 177
SOUNDWAVE	018
SPECTRA	133
SPECTRICON	002
SQUAREVIEW	047
SR2000	106
SSS	009, 052
STANDARD	004, 063, 064, 098
STARLITE	052, 161
STERN	042, 076, 099

14. Appendix

SUNKAI	117, 118
SUNSTAR	161
SUPERTECH	097, 161
SUPRA	025
SUSUMU	064
SUPREMACY	172
SUPREME	177
SULVANIA	010, 012, 014, 015, 023, 057, 058, 080
SYMPHONIC	047, 172, 177
SYSLINE	018
TADISTAR	161
TADNDY	124
TANDY	028, 030, 042, 063, 064
TASHIKO	110, 161, 172
TASHKO	017, 063
TATUNG	002, 018, 024, 028, 063, 124
TEC	063, 133, 161
TECHLINE	127, 158
TECHNEMA	098
TECHNICS	007, 020, 021, 070
TECHNISAT	130, 161
TECHNOL ACE	051
TECHWOOD	002, 021, 025, 177
TECNISON	161
TEKNIKA	006, 009, 019, 023, 025, 026, 029, 036, 051, 052, 057
TELEAVIA	171
TELECO	135
TELEFUNKEN	025, 163
TELEMEISTER	098
TELETECH	004
TELETON	017, 057, 063, 097, 099
TELEVIDEON	098
TENSAI	064, 093, 098, 118, 158, 161
TESLA	135
TEXET	062, 064
THOMAS	110, 124, 177
THOMSON	068, 155, 163, 170, 171
THORN	018, 028, 040, 087, 107, 108, 110, 112, 128, 129, 161, 163, 165, 168, 172, 177
TMK	025, 049, 050
TOKAI	124
TOMASHI	075
TOSHIBA	017, 026, 038, 040, 069, 106, 108, 172
TOSONIC	056
TOTEVISION	019
TOWADA	099, 127, 158
TRIUMPH	049, 069
TV TEXT	089
UHER	098, 127, 158, 161, 173
ULTRA	081, 124
ULTRAVOX	127, 158, 159, 160, 161
Universal	011, 013
UNIVERSUM	018, 071
UNIVOX	159
URANYA	158
VECTOR RESEARCH	015
VESTEL	018, 161
VICTOR	022
VIDEOTECHNIC	063
VIDEOTON	094
VIDIKRON	023
VIDTECH	009, 017, 050
VISA	004, 005, 017, 018, 042, 068
VISION	098, 161
VOXSON	042, 099, 159, 160
VTQ	126
WALTHAM	063, 094, 099
WARDS	006, 009, 010, 011, 013, 014, 015, 023, 025, 034, 040, 043, 050, 051, 058
WATSON	018, 098, 161
WATT RADIO	097, 127, 158
WEGA	017, 160, 172
WHITE WESTINGHOUSE	018, 062, 098, 106, 158, 161
WORLD-TECH	133
YAMAHA	009, 015
YOKO	018, 063, 071, 133, 161
YORK	108
ZANUSSI	076, 099
ZENITH	006, 007, 029, 177
ZONDA	002

14. Appendix

3. DVD Code List

Brand	Code
DVD Players	
AIWA	146
ALPINE	098
APEX DIGITAL	087, 111, 115
BROKSONIC	130
CINEVISION	091
DENON	007, 080, 173
DURABRAND	091
DVD 2000	017
EMERSON	091, 143
FISHER	147
FUNAI	143
GE	026, 027
GOLDSTAR	091
GO VIDEO	137, 091, 220, 221, 222
HARMAN KARDON	084, 140
HITACHI	101
INTEGRA	142, 180
JBL	084
JVC	012
KENWOOD	151
KLH	135
KRELL	104
LEXICON	148
LG	057, 074, 091
MAGNAVOX	066, 096
MARANTZ	095, 105
MERIDIAN	153
MICROSOFT	027
MITSUBISHI	017
MYRYAD	102, 134
NAD	088
NAKAMICHI	103
ONKYO	035, 076, 180
ORION	130
PANASONIC	021, 138, 139, 144, 150
PHILIPS	066, 095, 105
PHILIPS-MAGNOVOX	035, 066

Brand	Code
PIONEER	131
POLAROID	233
POLK AUDIO	035, 066
PROCEED	086
PROSCAN	026, 027
RCA	026, 027
SAMSUNG	056, 070, 119, 137, 159, 165, 170
SANSUI	154
SANYO	147
SEARS	147
Sensory Science	222
SHARP	094
SONY	033, 118, 126, 145, 191
SYLVANIA	143
SYMPHONIC	143
TATUNG	102
TECHNICS	138
TECHWOOD	088
THOMPSON	026, 027
TIVO	234, 235
TOSHIBA	035, 034, 130, 141, 164, 188
VENTURER	149
YAMAHA	066, 089, 138, 195, 197
ZENITH	057, 074, 091
DVD Recorders	
GO VIDEO	220, 221, 222
PANASONIC	139
SENSORY SCIENCE	222
SONY	191
TOSHIBA	188
TV/DVD Combo	
AIWA	146
FUNAI	143
SAMSUNG	165
SYLVANIA	143
SYMPHONIC	143
TOSHIBA	130
TV/DVD/VCR Combos	

MAGNAVOX	143
PANASONIC	144
SYLVANIA	143
TOSHIBA	164
DVD/VCR Combos	
GO VIDEO	137
PANASONIC	150

PHILIPS	105 (VCR Functions for VCR 067)
SAMSUNG	137, 159
SANSUI	154
SONY	145
TOSHIBA	141
ZENITH	091 (VCR Functions for VCR 101)

4. Audio & AUX Code List

Brand	Code
Audio Receiver	
ADCOM	082, 092, 225, 161, 023, 148, 149
AIWA	018, 104, 170, 202, 203, 213, 211, 188
AKAI	189
ANTHEM	127, 128
ARCAM	141, 255
ATLANTICTECHNOLOGY	134
AUDIO FILE	071
B & K	096, 097
BOSE	070, 170, 147, 199, 224, 227
BOSTON ACOUSTICS	246
CARVER	006, 022, 028, 050, 061, 071, 077, 185, 201, 214, 226
CLARION	026
DELPHI	251
DENON	002 ,109, 121, 133, 215, 230, 234
ELAN	057, 090
ESCIENT	229
FISHER	047, 182, 214
FLEXTRONICS	207
FOSGATE AUDIONICS	134, 231
GOLDSTAR	008
HARMAN KARDON	118, 119, 153, 154, 231, 233
HITACHI	020
INTEGRA	029
JVC	034, 091, 114, 163, 191
KENWOOD	005, 026, 037, 066, 145, 182, 192, 196, 252
KLH	123
KRELL	072, 150, 197, 222

Brand	Code
LEXICON	120, 159, 160, 235, 236, 237
LINN	124, 206
LUXMAN	004, 009, 052, 115, 137, 139, 165
MAGNAVOX	086, 152, 164, 208
MARANTZ	006, 015, 028, 031, 040, 056, 063, 185, 186
MCINTOSH	053, 238
MERIDIAN	012, 013, 100
MITSUBISHI	204, 242, 243
MONDIAL	042, 043, 081, 112, 157, 158
MYRYAD	030, 099
NAD	038, 113, 186, 210, 216
NAKAMICHI	054, 111, 172, 183, 244, 245
NIRO	135
NILES	241
ONKYO	017, 029, 046, 080, 108 ,209
OPTIMUS	026, 041
OUTLAW	134
PANASONIC	032, 098, 177, 195, 219, 221
PARASOUND	003, 103, 105, 125, 126, 129, 130, 132
PHILIPS	063, 249, 250
PIONEER	014, 035, 039, 044, 069, 078, 116, 168
POLKAUDIO	251
PROCEED	021, 144
RCA	010, 048, 055, 067, 117, 156
REALISTIC	019, 073, 075
ROTEL	074 ,083, 085
RUSSOUND	223, 239
SAMSUNG	016

14. Appendix

SANSUI	040, 048, 063, 065, 110, 228
SANYO	047, 059
SCOTT	019
SHARP	026, 094, 131, 175
SHERWOOD	024, 102, 106, 246
SONY	018, 025, 101, 166, 179, 180, 184, 218, 220, 247, 248
SOUNDESIGN	036
SUNFIRE	142, 143, 146
TEAC	005, 019, 049, 111, 212, 217
TECHNICS	007, 122, 177, 178, 193, 200, 219, 254
THETA DIGITAL	136
TOSHIBA	033, 060, 087

YAMAHA	011, 026, 027, 051, 067, 089, 169, 173, 181, 205, 232, 253
MEDIA PC Controls	
DELL	190, 194
GATEWAY	190, 194
HP	190, 194
SONY	190, 194
TOSHIBA	190, 194
WINBOOK	190, 194
XM Radios	
DELPHI	251
KENWOOD	252
POLKAUDIO	251
SONY	220

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